

THE FOLLOWING POWER PLANT IS AVAILABLE FOR SALE WITH US WITH IMMEDIATE DELIVERY:

1 No. - 445 MW SIEMENS ELECTRIC (2009/10) make, Combined Cycle Power Plant, having the Following Technical Specifications:

PLANT DETAILS:

445 MW combined cycle plant the plant is based on Siemens V94.2 gas turbines.

The plant was installed in 2006, natural gas was available only from March 2009. The following are the commissioning dates of various equipment.

- GT # 1A - 30 March 2009
- GT #1B - 10 March 2009
- Open Cycle declared on 04 June 2009
- STG was commissioned on 22 June 2010
- Combined Cycle declared on 30 June 2010

The plant running hours as following:

GT # 1A = 32,361 EOH
GT # 1B = 22,913 EOH
STG = 19,460 EOH

STEAM TURBINE:

The operating hours of the steam turbine is 17900 hours.

GAS TURBINES:

Dehumidifier is built in feature of V94.2.

TECHNICAL DETAILS:

| Equipment | Manufacturer | Details | Qty |
|-----------|--------------|---------|-----|
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| Gas Turbine | Siemens Electric | V94.2, 139 MW | 2 |
| Gas Turbine Generator | Electrosila | | 2 |
| Steam Turbine | LMZ | K166/107, 158MW | 1 |
| Steam Turbine Generator | Electrosila | 15.85kv, 200MW | 1 |
| Heat Recovery Boiler | L&T | HP 222tph @107bar, MP 38tph @ 22bar and LP 19tph @4.5bar | 2 |
| Generator Transformers | Crompton Greaves | 400 kv / 15.75 kv | 2 |
| Auxiliary Transformers | Crompton Greaves | 6.6 kv / 415 v | 2 |
| HP / IP/ LP Boiler | Nasosenergomash/ | 270m ³ /hr | 3 |
| Feedwater Pumps | Nasosenergomash/ | 65m ³ /hr | 2 |
| | Kirloskar | 25m ³ /hr | 2 |
| CEP | Nasosenergomash | 245tph | 2 |
| DM Plant | Doshi Ion Exchange | | 1 |
| CW Pumps | Kirloskar | | 3 |
| CW Pump Motors | WEG | | 3 |
| Cooling Tower | Paharpur | 16 cells | 1 |
| Emergency Diesel Generator | Cummins | 1250kva | 1 |

TECHNICAL SPECIFICATIONS:

| GAS TURBINE & AUXILIARIES | | |
|---|---|---|
| GAS TURBINE | | |
| Make, model, Type | : | Make SIEMENS Model : BM 380 Frame : V94.2 |
| Design ISO Output | : | 156000 kW |
| Overall Correction factor for power | : | 0.8938 |
| Auxiliary power consumption | : | 1409 kW |
| Net site electrical output in Open cycle mode | : | 139530 kW |
| Net electrical output in combined cycle mode | : | 139086 kW |
| Heat rate correction factor to site condition | : | 0.966 |

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| Net heat rate on LCV basis | : | 2675.6 Kcal/Hr(GT heat rate for combined cycle operation) |
| Type of fuel | : | Natural Gas |
| Type of governing system | : | Siemens \ symadyn |
| Exhaust temp | : | 556.2 °C |
| Exhaust Flow | : | 480.87 Kg/sec |
| Fuel consumption | : | 9.9 Kg/sec |
| NOx level | : | 50 ppm |
| NOx Control | : | Dry Low NOx burners |
| Turning gear | : | Through oil jets around 100 RPM |
| Full Speed of machine | : | 3000 RPM |
| Compressor | : | Axial,17 stage, 5 th and 10 th stage for bleeding. |
| Turbine | : | 2 combustion chamber, 4 stage |
| Water washing | : | DM water, Offline as well as On line. |
| Starting Device | : | Electrical starting, through generator and frequency converter. Power requirement=2900 kW |
| Air filter | : | 2 micron,Main& Pre filter, self cleaning pulse jet type. |
| GAS TURBINE AUXILAIRIES | | |
| Shaft mounted Oil Pump | : | Not Provided |
| Auxiliary oil pump | : | 37 kW Qty - 2 Nos. |
| Emergency Oil pump | : | 37 kW Qty - 1 No. |
| Vapour extraction fan | : | 0.3 kW Qty - 1 No. |
| Turning gear | : | Hydraulic oil driven Qty - 1 No. |
| Air filter cleaning compressor | : | Qty - 2 Nos. |
| GT EXHAUST SYSTEM | | |
| DIVERTER DAMPER | | |
| Make | : | Bachmann India Limited, Faridabad |
| Position | : | Between Inlet duct & Guillotine Damper |
| Damper dimensions | : | 5600 x 5600 mm |
| Qty | : | 2 Nos. for GTG# 1A & 1B |
| Sealing system | : | Duplex |
| Sealing Efficiency | : | 100 % with SAF 99.98 Without SAF |
| Function | : | Isolation |

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| Operating time | : | 60 Sec |
| Max. operating temp. | : | 600 ⁰ C |
| Main Drive Actuator | : | Make :Limatorque , Faridabad Model : SMB-4 Qty : 1 No. Data Sheet no : J-0787/03-004 |
| Gear Box | : | Make :Limatorque , Faridabad Model : H10 BC + SGA2.92 Qty : 1 No. Data Sheet no : J-0787/03-004 |
| Seal Air Blower | : | Make : Patel Air Flow Type : Centrifugal Qty : 2 Nos. Data Sheet no : J-0787/03-005 |
| Motor for Blower | : | Make : CGL Type : Sq. Cage , 3 phase AC Size : 20 HP Qty : 2 Nos. Data Sheet no : J-0787-03-0006 |
| Gate Valve Actuator | : | Make :Limatorque , Faridabad Type : Electric Size : L120-20 Qty : 2 Nos. Data Sheet no : J-0787-03-0004 |
| B.F.V. Actuator | : | Make :Limatorque , Faridabad Type : Electric Size : L120-10 + T-100 Qty : 1 No. Data Sheet no : J-0787-03-0004 |
| Gate Valve | : | Make : K.S.B. Class : 150 # Size : 200 NB Qty : 2 Nos. |
| Blade Seals | : | Make : Bachmann India Limited, Faridabad Type : Flexible metal Material : Inconel 625 Qty : 2 sets/unit (1 HRSG sie& 1 Bypass side) |
| Reference Documents | : | GA Drgno : J-0787-03-0000,R4,10 Sheets |
| GUILLOTINE DAMPER | | |
| Position | : | Between Diverter Damper & HRSG Inlet |
| Damper dimensions | : | 5600mm x 5600mm |
| Qty | : | 2 Nos. for GTG# 1A & 1B |
| Sealing system | : | Duplex |

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| Sealing Efficiency | : | 100 % with SAF 99.98 Without SAF |
| Function | : | Isolation |
| Operating time | : | 5 Min |
| Max. operating temp. | : | 600 ⁰ C |
| Main Drive Actuator | : | Make :Limitorque , Faridabad Model : SMB-3 Qty : 1 No. Motor : 19.74 HP , 4 pole |
| Gear Box | : | Make :Limitorque , Faridabad Model : H6 BC Qty : 1 No. |
| Seal Air Blower | : | Make : Patel Air Flow Capacity : 0.58 m ³ /sec Type : Impeller directly mounted on motor shaft |
| Motor for Blower | : | Make : CGL Type : Sq. Cage , 3 phase AC Size : 7.26 HP,2 Pole |
| Gate Valve Actuator | : | Make :Limitorque , Faridabad Type : Electric Size : L120-10 Motor : 0.54 HP , 2 Pole |
| Reference Documents | : | P&ID no : J-0787-03-0011,R2 |
| EXPANSION JOINT (HRSG INLET) | | |
| Qty | : | 2 Nos. for GTG# 1A & 1B |
| Axial Compression movement | : | 120 mm |
| Axial Ext. movement | : | 10 mm |
| Lateral movement | : | 110 mm |
| MOC | : | Inlet Frame : IS 2062 Gr. B Outlet Frame : SA 387 Gr. 12 Fabric element : UFV-100 |
| Reference Documents | : | Drgno : J-0787-07-0000,R4 (2 sheets) |
| EXPANSION JOINT (DIVERTER DAMPER INLET) | | |
| Qty | : | 2 Nos. for GTG# 1A & 1B |
| Axial Compression movement | : | 40 mm |
| Axial Ext. movement | : | 10 mm |
| Lateral movement | : | 10 mm |
| MOC | : | Inlet Frame : IS 2062 Gr. B Fabric element : UFV-100 |
| Reference Documents | : | Drgno : J-0787-01-0000,R3 (2 sheets) |
| EXPANSION JOINT (DIVERTER DAMPER OUTET TOWARDS STACK) | | |

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| Qty | : | 2 Nos. for GTG# 1A & 1B |
| Axial Compression movement | : | 30 mm |
| Axial Ext. movement | : | 10 mm |
| Lateral movement | : | 10 mm |
| MOC | : | Inlet Frame : IS 2062 Gr. B Fabric element : UFV-100 |
| Reference Documents | : | Drgno : J-0787-02-0000,R3 (2 sheets) |
| SILENCER TRANSITION (SQ. TO SQ.) & (SQ. TO ROUND) | | |
| Qty | : | 2 Nos. for GTG# 1A & 1B |
| MOC | : | Shell plate : IS 2062 Gr. B Insulation Cover : SS 409 |
| Reference Documents | : | Drgno : J-0787-08-0000,R3 (2 sheets) Drg no : J-0787-10-0000,R2 (2 sheets) |
| EXHAUST SILENCER | | |
| Qty | : | 2 Nos. for GTG# 1A & 1B |
| MOC | : | Main Frame : IS 2062 Gr. B Insulation Cover : SS 409 |
| Reference Documents | : | Drgno : J-0787-09-0000,R3 (3 sheets) |
| BYPASS STACK | | |
| Qty | : | 2 Nos. for GTG# 1A & 1B |
| MOC | : | Shell plate : IS 2062 Gr. B Insulation Cover : SS 409 |
| Reference Documents | : | Drgno : J-0787-11-0000,R2 (3 sheets) |
| HRS G | | |
| PERFORMANCE PARAMETERS | | |
| Manufacturer | : | Larsen & Toubro Limited, |
| Type of Boiler | : | Vertical Induced Circulation |
| Max. Continuous rating (MCR): | : | HP circuit - 221 Tonnes/hr IP circuit - 38 Tonnes/hr LP circuit - 38.85 Tonnes/hr |
| Steam Temp. at terminal Point : | : | HP circuit - 528 ⁰ C IP circuit - 324 ⁰ C LP circuit - 223 ⁰ C |
| Steam Pressure. at terminal Point | : | HP circuit - 112.7 Bar IP circuit - 23.70 Bar LP circuit - 4.5 Bar |
| HP DRUM | | |
| Make | : | ISGEC, Yamunanagar |

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| Qty | : | 1 No. for HRSG A 1 No. for HRSG B |
| Construction Code | : | IBR 1950 |
| Fluid circulated | : | Steam & DM water |
| Heating Surface | : | 31.42 m ² |
| Capacity | : | 41.5 m ³ |
| Dimensions | : | OD 2500 x 10458 mm length |
| Thickness | : | Shell - 95.6 mm Dish End - 54.9 mm |
| Insulation thk | : | 200 mm |
| Material | : | SA 302 Grade B |
| Weight | : | Empty - 81.3 MT |
| Design Pressure | : | 127.5 Kg/cm ² (g) |
| Hydro Test Pressure | : | 191.25 Kg/cm ² (g) |
| Design Temperature | : | 331 ⁰ C |
| Reference Documents | : | GA Drg no - PV-01-1564 |
| IP DRUM | | |
| Make | : | Vibha Steel , Vadodara |
| Qty | : | 1 No. for HRSG A 1 No. for HRSG B |
| Capacity | : | 23.58 m ³ |
| Heating Surface | : | 47.2 m ² |
| Dimensions | : | OD 2564 x 5426 mm length |
| Insulation thk | : | 100 mm |
| Fluid circulated | : | Steam & DM water |
| Thickness | : | Shell - 28.2 mm Dish End - 31.6 mm |
| Material | : | SA 516 Grade 70 |
| Weight | : | Empty - 16.2 MT |
| Design Pressure | : | 30.6 Kg/cm ² (g) |
| Hydro Test Pressure | : | 45.9 Kg/cm ² (g) |
| Design Temperature | : | 236.2 ⁰ C |
| Reference Documents | : | GA Drg no. VY830001-32530-DM101-1A |
| LP DRUM | | |
| Make | : | Vibha Steel , Vadodara |
| Qty | : | 1 No. for HRSG A 1 No. for HRSG B |
| Capacity | : | 18.28 m ³ |
| Heating Surface | : | 37.6 m ² |
| Dimensions | : | OD 2500 x 4298 mm length |

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| Insulation thk | : | 75 mm |
| Fluid circulated | : | Steam & DM water |
| Thickness | : | Shell - 09 mm Dish End - 16 mm |
| Material | : | SA 516 Grade 70 |
| Weight | : | Empty - 5.7 MT |
| Design Pressure | : | 9 Kg/cm ² (g) |
| Hydro Test Pressure | : | 13.5 Kg/cm ² (g) |
| Design Temperature | : | 183 ⁰ C |
| Reference Documents | : | GA Drg no. VY830001-32550-DM101-1A |
| DEAERATOR | | |
| Make | : | Larsen & Toubro Limited, Vadodara |
| Qty | : | 1 No. for HRSG A 1 No. for HRSG B |
| DA Type | : | Spray Type |
| Design Pressure | : | 8.77 Kg/cm ² (g) |
| Design Temperature | : | 205 ⁰ C |
| Hydro Test Pressure | : | 11.4 Kg/cm ² (g) |
| Fluid circulated | : | Steam & Boiler Feed Water |
| Capacity | : | 278400 Kg/hr |
| Weight | : | Empty - 21000 Kgs |
| MOC | : | SA 516 Grade 70 Lining shell - SS 304 |
| Dimensions | : | OD 3032 x 9250 Length x 16 mm thk |
| Reference Documents | : | GA Dr no - 540301 |
| CONTINUOUS BLOW DOWN TANK | | |
| Make | : | AVU Engineers , Hyderabad |
| Qty | : | 1 No. for HRSG A 1 No. for HRSG B |
| Design code | : | IBR |
| Tag No. | : | 1A BD 200T |
| Design Pressure | : | 9 Kg/cm ² (g) |
| Design Temperature | : | 179.1 ⁰ C |
| Hydro Test Pressure | : | 13.5 Kg/cm ² (g) |
| Fluid circulated | : | Boiler Quality water & steam |
| Capacity | : | 5.3 m ³ |
| Weight | : | Empty - 3314 Kgs |
| Insulation thk | : | 75 mm |
| Reference Documents | : | GA Drg no - AVU/1-2K4/L&T/CBD/0748 |

| INTERMITTENT BLOW DOWN TANK | | |
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| Make | : | AVU Engineers , Hyderabad |
| Qty | : | 1 No. for HRSG A 1 No. for HRSG B |
| Design code | : | IBR |
| Tag No. | : | 1A BD 201T |
| Design Pressure | : | 2.5 Kg/cm ² (g) |
| Design Temperature | : | 200 °C |
| Hydro Test Pressure | : | 3.75 Kg/cm ² (g) |
| Fluid circulated | : | Boiler Quality water & steam |
| Capacity | : | 5.3 m ³ |
| Weight | : | Empty - 2454 Kgs |
| Insulation thk | : | 50 mm |
| Reference Documents | : | GA Drg no - AVU/1-2K4/L&T/CBD/0749A |
| HP SUPERHEATER | | |
| Make | : | Samuang Corporation, Korea |
| Qty | : | 2 Nos. |
| Type | : | Convection |
| Heating Surface | : | 12376 m ² |
| Weight | : | Empty - 43.5 T |
| No. of Tubes (SH2/SH1) | : | 328 |
| OD of tubes | : | 38 |
| Max. Gas Temp. | : | 551.7 ⁰ C |
| MOC of Tubes | : | SA 213 T91 |
| Super Heater Headers | : | |
| Outside Diameter | : | 355.6 mm |
| Design Pressure | : | 129 Kg/cm ² (g) |
| Weight | : | 1.5 T |
| Material | : | SA 335 P1 |
| IP SUPERHEATER | | |
| Make | : | Samuang Corporation, Korea |
| Qty | : | 1 No. |
| Type | : | Convection |
| Heating Surface | : | 1957 m ² |
| Weight | : | Empty - 16.7 T |
| No. of Tubes (SH2/SH1) | : | 164 |
| OD of tubes | : | 44.5 |
| Max. Gas Temp. | : | 333.3 ⁰ C |

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| MOC of Tubes | : | SA 210 A1 |
| Super Heater Headers | : | |
| Outside Diameter | : | 273.1 |
| Design Pressure | : | 32.10 Kg/cm ² (g) |
| Weight | : | 0.5 T |
| Material | : | SA 106 Grade B |
| LP SUPERHEATER | | |
| Make | : | Samuang Corporation, Korea |
| Qty | : | 1 No. |
| Type | : | Convection |
| Heating Surface | : | 739 m ² |
| Weight | : | Empty - 7.6 T |
| No. of Tubes (SH2/SH1) | : | 82 |
| OD of tubes | : | 38 |
| Max. Gas Temp. | : | 233.9 ⁰ C |
| MOC of Tubes | : | SA 210 A1 |
| Super Heater Headers | : | |
| Outside Diameter | : | 323.9 mm |
| Design Pressure | : | 10.27 Kg/cm ² (g) |
| Weight | : | 0.5 T |
| Material | : | SA 106 Grade B |
| HP EVAPORATOR | | |
| Make | : | Samuang Corporation, Korea |
| Qty | : | 1 No. |
| Type | : | Induced Circulation |
| Heating Surface | : | 28174.4 m ² |
| Fin Height | : | 30 mm |
| Fin Density | : | 265 mm |
| Fin Thickness | : | 0.8 mm |
| Tube Coils | : | |
| Type | : | Serpentine Tube arrangement |
| No. of rows/sections | : | 14 |
| OD/thickness | : | 38.1/3.25 mm |
| Design Pressure | : | 129 Kg/cm ² (g) |
| Design Temperature | : | 358 ⁰ C |
| MOC | : | SA 210 A1 |
| Size of Inlet/outlet headers | : | 406.4/406.4 mm |
| IP EVAPORATOR | | |

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|------------------------------|---|--------------------------------|
| Make | : | Samuang Corporation, Korea |
| Qty | : | 1 No. |
| Type | : | Induced Circulation |
| Heating Surface | : | 12971.7 m ² |
| Fin Height | : | 23.5 mm |
| Fin Density | : | 230 mm |
| Fin Thickness | : | 0.8 mm |
| Tube Coils | : | |
| Type | : | Serpentine Tube arrangement |
| No. of rows/sections | : | 8 |
| OD/thickness | : | 38/3.25 mm |
| Design Pressure | : | 32.1 Kg/cm ² (g) |
| Design Temperature | : | 267 ⁰ C |
| MOC | : | SA 210 A1 |
| Size of Inlet/outlet headers | : | 273.1/323.9 mm |
| LP EVAPORATOR | | |
| Make | : | Samuang Corporation, Korea |
| Qty | : | 1 No. |
| Type | : | Induced Circulation |
| Heating Surface | : | 15063.7 m ² |
| Fin Height | : | 30.2 mm |
| Fin Density | : | 290 mm |
| Fin Thickness | : | 0.8 mm |
| Tube Coils | : | |
| Type | : | Serpentine Tube arrangement |
| No. of rows/sections | : | 8 |
| OD/thickness | : | 31.8/2.9 mm |
| Design Pressure | : | 10.3 Kg/cm ² (g) |
| Design Temperature | : | 213 ⁰ C |
| MOC | : | SA 210 A1 |
| Size of Inlet/outlet headers | : | 168.3/406.4 mm |
| HP ECONOMISER | | |
| Make | : | Samuang Corporation, Korea |
| Qty | : | 1 No. |
| Type | : | Induced Circulation |
| Heating Surface | : | 25393.5/19564.5 m ² |
| Fin Height | : | 30/30.2 mm |
| Fin Density | : | 280/290 mm |

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| Fin Thickness | : | 0.8 mm |
| Tube Coils | : | |
| Type | : | Serpentine Tube arrangement |
| No. of rows/sections | : | 12/12 |
| OD/thickness | : | 38.1/3.25 & 31.8/2.9 mm |
| Design Pressure | : | 204/204 Kg/cm2(g) |
| Design Temperature | : | 331/236 ⁰ C |
| MOC | : | SA 210 A1 |
| Size of Inlet/outlet headers | : | 273.1/323.9 & 273.1/273.1 |
| LP ECONOMISER | | |
| Make | : | Samuang Corporation, Korea |
| Qty | : | 1 No. |
| Type | : | Induced Circulation |
| Heating Surface | : | 3031.1 m ² |
| Fin Height | : | 40.21312 mm |
| Fin Density | : | 290 mm |
| Fin Thickness | : | 0.8 mm |
| Tube Coils | : | |
| Type | : | Serpentine Tube arrangement |
| No. of rows/sections | : | 12 |
| OD/thickness | : | 31.8/2.9 mm |
| Design Pressure | : | 49 Kg/cm2(g) |
| Design Temperature | : | 232 ⁰ C |
| MOC | : | SA 210 A1 |
| Size of Inlet/outlet headers | : | 273.1/273.1 mm |
| LP ECONOMISER | | |
| Make | : | Samuang Corporation, Korea |
| Qty | : | 1 No. |
| Type | : | Induced Circulation |
| Heating Surface | : | 22595.6 m ² |
| Fin Height | : | 30.2 mm |
| Fin Density | : | 290 mm |
| Fin Thickness | : | 0.8 mm |
| Tube Coils | : | |
| Type | : | Serpentine Tube arrangement |
| No. of rows/sections | : | 12 |
| OD/thickness | : | 31.8/2.9 mm |
| Design Pressure | : | 23.5 Kg/cm2(g) |

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| Design Temperature | : | 155 ⁰ C |
| MOC | : | SA 210 A1 |
| Size of Inlet/outlet headers | : | 273.1/273.1 mm |
| CONDENSATE PRE HEATER | | |
| Make | : | Sulzer Pumps,Thane |
| Qty | : | 2 Nos. for HRSG A 2 Nos. for HRSG B |
| Heating Surface | : | 22595.6 m ² |
| Fin Height | : | 30.2 mm |
| Fin Density | : | 290 mm |
| Fin Thickness | : | 0.8 mm |
| Tube Coils | : | |
| Type | : | Serpentine Tube arrangement |
| No. of banks/assemblies | : | 82 |
| OD/thickness | : | 31.8 mm |
| Design Pressure | : | 23.5 Kg/cm2(g) |
| Design Temperature | : | 155 ⁰ C |
| MOC | : | SA 210 A1 |
| Size of Inlet/outlet headers | : | 273.1/273.1 mm |
| PHOPHATE DOSING SYSTEM | | |
| Make | : | Milton Roy , Chennai |
| Nos. of tanks per HRSG | : | 2 Nos. |
| Type of tank | : | Vertical |
| Material of Tank | : | SS 304 |
| Capacity | : | 330 litres |
| Size of tank | : | OD 900 mm x 1300 Height |
| Dosing Pump | : | |
| Make | : | Milton Roy , Chennai |
| Type of Dosing Pump | : | Plunger |
| Nos. of Dosing Tank | : | 6 Nos. |
| Diaphrahm Material | : | Packing PTFE - Bridge Rope |
| Design Code | : | API675 |
| Rated Capacity | : | HP - 12 LPH IP - 3.5 LPH LP - 3.5 LPH |
| SAFETY VALVES | | |
| Make | : | Tyco Sunmar Limited |
| Type | : | Spring Loaded |

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| Size | : | HP Drum - 2.5/2.5 inch IP Drum - 3/3 inch LP Drum - 3/3 inch HP Superheater - 2 inch IP Superheater - 3 inch LP Superheater - 3 inch |
| Qty | : | HP Drum - 2 Nos. IP Drum - 2 Nos. LP Drum - 2 Nos. HP Superheater - 1 No. IP Superheater - 1 No. LP Superheater - 1 No. |
| Capacity (Tonnes/hr) | : | HP Drum - 98.5/99.3 IP Drum - 15.1/15.8 LP Drum - 10.6/11 HP Superheater - 41.8 IP Superheater - 13.2 LP Superheater - 14.7 |

HP BOILER STARTUP PUMP

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|----------------------|---|---|
| Make | : | EnsivalMoret , Belgium |
| Model no. | : | PRNR100-26 |
| Qty | : | 1 No. for HRSG A 1 No. for HRSG B |
| Capacity | : | 200 m ³ /hr |
| Total Head | : | 53 MLC |
| Speed | : | 2570 rpm |
| Motor | : | Make - ABB Rating - 45 kW Frame Size - 225 |
| Performance Standard | : | HIS |
| No. of stages | : | One |
| MOC | : | Impeller & Casing - A 487 Gr. CA6NM Casing wear ring & impeller wear ring - A 276 TY 410 Shaft - AISI 4140 |
| Casing | : | Volute type |

IP BOILER STARTUP PUMP

| | | |
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| Make | : | Sulzer Pumps,Thane |
| Model no. | : | ZE 40-1200 |
| Qty | : | 1 No. for HRSG A 1 No. for HRSG B |
| Capacity | : | 27 m ³ /hr |

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| Total Head | : | 45 MLC |
| Speed | : | 2950 rpm |
| Motor | : | Make - CGL Rating - 7.5 kW Frame Size - ND 160 M |
| Performance Standard | : | HIS |
| No. of stages | : | One |
| MOC | : | Impeller & Casing - A 487 Gr. CA6NM Shaft - A 276 TY 410 |
| LP BOILER STARTUP PUMP | | |
| Make | : | Sulzer Pumps,Thane |
| Model no. | : | ZE 40-1200 |
| Qty | : | 1 No. for HRSG A 1 No. for HRSG B |
| Capacity | : | 14 m ³ /hr |
| Total Head | : | 39 MLC |
| Speed | : | 2950 rpm |
| Motor | : | Make - CGL Rating - 5.5 kW Frame Size - ND/325 |
| Performance Standard | : | HIS |
| No. of stages | : | One |
| MOC | : | Impeller & Casing - A 487 Gr. CA6NM Shaft - A 276 TY 410 |
| Reference Documents | : | GA drg no - VY830001-33213-DM001 |
| LP BOILER FEED PUMP | | |
| Make | : | KSB Pumps Limited |
| Model no. | : | WKS 50/5 (DSB) |
| Qty | : | 2 Nos. for HRSG A 2 Nos. for HRSG B |
| Capacity | : | 25 m ³ /hr |
| Total Head | : | 140 MLC |
| Speed | : | 2900 rpm |
| Motor | : | Make - Bharat Bijlee Rating - 18.5 kW Frame Size - 180M |
| Performance Standard | : | HIS |
| No. of stages | : | 5 (Five) |
| MOC | : | Impeller - A 743 Gr. CA6NM Casing - A 216 Gr. WCB Shaft - A 276 TY 410 |

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|--|---|---|
| Reference Documents | : | GA drg no - F041058386-1 |
| CPH RECIRCULATION PUMP | | |
| Make | : | Sulzer Pumps,Thane |
| Model no. | : | ZE 80-2250 |
| Qty | : | 2 Nos. for HRSG A 2 Nos. for HRSG B |
| Capacity | : | 79.42 m ³ /hr |
| Total Head | : | 68.5 MLC |
| Speed | : | 2950 rpm |
| Motor | : | Make - CGL Rating - 30 kW Frame Size - ND 200 L |
| Performance Standard | : | HIS |
| No. of stages | : | One |
| MOC | : | Volute Casing - A 743 Gr. CA6NM Shaft - A 276 TY 410 |
| Reference Documents | : | GA drg no - VY830001-33215-DM001-B |
| JIB CRANE | | |
| Make | : | Reva Cranes & Hoists |
| Location | : | Outdoor |
| Class of duty | : | II as per IS 3938/IS 807 |
| Qty | : | 2 Nos. |
| Capacity | : | 2 Tonnes |
| Lift | : | 250 Mtrs. |
| Boom Radius | : | 3 Mtrs. |
| Swivelling of boom | : | 90 ⁰ |
| Swivelling speed | : | 0.25 rpm |
| Swivelling Motor | : | 0.55 kW/6 pole |
| Hoisting Speed | : | 3.15 M/min |
| Hoisting Motor | : | 2.2 kW |
| Hoisting Brake | : | DC Disc |
| CT Speed | : | 16 M/min |
| CT Motor | : | 1 x 0.55 kW,Sq. cage |
| CT Brake | : | DC Disc |
| Wire rope | : | Dia 8 mm , Stel core 6 x 36 |
| Drum dia | : | OD 200 mm , 4 fall |
| STEAM TURBINE & AUXILIARIES | | |
| Make & Nos. | : | LMZ, Russia Qty - 1 No. |

| | | |
|--|---|--|
| Type of STG | : | HP- Reaction-Impulse LP- Impulse |
| MCR at generator terminal | : | 166128 kW |
| Speed of turbine | : | 3000 rpm |
| Turning gear speed | : | Cog wheel, 4 RPM |
| Condenser back pressure | : | 0.088 bar |
| Steam flow to condenser | : | 555.94 T/Hr. |
| Minimum flow for synch. | : | 27.36 (5%) T/Hr. |
| Minimum pressure & Temp before rolling the machine | : | 45/350 Bar |
| Exhaust conditions Temp, Dry fraction, Enthalpy | : | Temp-34.4 °C, Enthalpy - 536.27 kCal/kG, D fraction – 13.9 % |
| Type of governing system | : | Mechanical-Hydraulic |
| Type of control oil | : | Separate from lube Oil, Fire resistance Oil. |
| Steam | : | HP/IP/LP units |
| Steam flow Superheated outlet | : | 441.97/75.99/37.98 T/Hr. |
| Steam Temperature | : | 528/324/219 °C |
| Superheater outlet pressure | : | 112.7/23.7/4.4 Bar |
| Drum Pressure | : | 113.7/24.5/5.2 Bar |
| Gland Sealing system | : | Start Up/Normal Operation |
| Source of steam | : | LP Steam/Self sealing |
| Quantity | : | 6/0.34 Kg/sec |
| pressure | : | 1.18/1.18 Bar |
| Temperature | : | 160-170/ 126 °C |
| Type of lube oil | : | Mineral oil |
| ELECTRICAL | | |
| GAS TURBINE GENERATOR TRANSFORMER | | |
| Make | : | Crompton Greaves ,Kanjur |
| Service | : | Outdoor |
| Duty | : | Continuous |
| Type Designation | : | Suitable for Bi-directional power flow |
| MVA rating ONAN Cooling | : | 115 MVA |
| MVA rating ONAF Cooling | : | 154 MVA |
| MVA rating OFAF Cooling | : | 192 MVA |
| Rated Voltage | : | HV winding - 420 KV LV winding - 15.75 KV |
| Rated Current | : | HV winding - 263.9 A LV winding - 7038.2 A |
| Connections | : | HV winding - Star LV winding - Delta |

| | | |
|---|---|--|
| Vector Group | : | YNd1 |
| Type of Cooling | : | ONAN/ONAF/OFAF |
| No. x capacity of cooling units | : | 2 x 60% |
| No. of cooling units required for full load operation | : | 2 x 50% |
| Cooling system Fan Motor | : | Make : Alstom Qty : 3 W + 1 S Rating : 0.7 kW |
| Cooling system oil Pump | : | Make : Flow Well Qty : 1 W + 1 S Rating : 4.4 kW |
| Winding Insulation | : | Type - Cellulose Based Class - Class A |
| Tap Changer | : | Type - Off Circuit Tap Changer Manufacturer - Paragon , Mumbai |
| X / R ratio | : | 51 approx |
| Winding Resistance | : | HV winding - 1 ohm per phase LV winding - 0.00375 ohm per phase |
| Approximate max. flux density | : | 1.65 Wb/m ² |
| HV Bushings | : | Manufacture - CGL Type - OIP Condensor Max. creepage distance - 25mm/KV Rating : 420 KV- 800A Reference Standard - IS 2099 |
| LV Bushings | : | Manufacture - Alstom Type - Porcelain , Oil filled Max. creepage distance - 25mm/KV Rating : 24 KV- 12500A (min.) Reference Standard - IS 2099 |
| HV Neutral Bushings | : | Manufacture - CGL Type - Porcelain , Oil communicating Rating : 36 KV- 630A (min.) Reference Standard - IS 2099 |
| Coolers (Radiator Banks) | : | Total weight with Oil - 28500 Kgs Total weight without oil - 21500 Kgs Thickness of radiator fins - 1.2 mm Type of mounting - Separately mounted |
| Gas detection device | : | Manufacturer - ATVUS/PRAYOG Type - 3 Inch , Double Float |
| Fault Pressure Device | : | Manufacturer - Sukrut Type - Self resetting Number Provided - one (1) Operating Pressure - 8 psi |

| | | |
|--|---|--|
| Winding - Type | : | Type of winding - Disc/Layer/Helical Current density at rated load for HV winding- 3.5A/mm ² Current density at rated load for LV winding- 3.5A/mm ² |
| Winding temp. Indicator | : | Manufacturer - Perfect Control Model no. - PC 171 Accuracy - 1.50 % |
| Transformer core details | : | Net core area - 7000 cm ² Core material & grade used - CRGO Silicon Steel Thickness of stamping - 0.27 mm |
| Transformer Oil | : | As per IS 335 |
| Approximate volume of Oil | : | 63500 Litres |
| Approximate overall dimensions (L x B x H) | : | 15100 x 9000 x 10400 mm |
| Quantity | : | 2 Nos. |
| Cooling | : | ONAN/ONAF/OFAF |
| Voltage (KV) HV/LV | : | 420 / 15.75 |
| BIL (KVP) HV/LV | : | 1300 / 125 |
| No. of phases | : | 3 Phase |
| Frequency | : | 50 Hz |
| Connection & Symbol | : | Star/Delta - TNd1 |
| Location | : | Ground mounted |
| Mounting | : | Mounted on roller assembly |
| Type of Conservator | : | COPS |
| Type of Tank | : | Bell Tank |
| Type of Tap charger | : | Off circuit , Paragon Associates make , 132 KV , 400A , 5 Position |
| Location of Tap charger | : | In-Tank |
| Tank Base construction | : | Roller assembly |
| Cooling Plant | : | Radiator with Fans & Pumps |
| Cooler Mounting | : | Radiator with isolation valves.Fans mounted on radiators |
| Type of bushing | : | HV - 420 KV / 800A Condensor type bushing HV N - 36 KV / 2000A Porcelain type bushing LV - 24 KV / 12500A Oil filled type bushing |
| Vaccum withstand level for tank | : | Full Vaccum |
| Oil filled Vs. Nitrogen filled despatch | : | N ₂ Filled |
| Integral Vs. Bolted Jacking pad | : | Integral |

| | | |
|---|---|---|
| Oil sampling arrangement | : | Top & bottom sampling valve provided on the tank |
| Control panels | : | Marshalling Box & OLTC Motor drive Unit |
| Reference Documents | : | GA Drg no - T61B 9045F Rating & Diagram Plate - Drg no - T62B 3167F Foundation detail - Drg no - T63B 8789 H Valve schedule plate - Drg no - T62B3221H |
| STEAM TURBINE GENERATOR TRANSFORMER | | |
| Make | : | Crompton Greaves ,Kanjur |
| Service | : | Outdoor |
| Duty | : | Continuous |
| Type Designation | : | Suitable for Bi-directional power flow |
| MVA rating ONAN Cooling | : | 125 MVA |
| MVA rating ONAF Cooling | : | 167 MVA |
| MVA rating OFAF Cooling | : | 208 MVA |
| Rated Voltage | : | HV winding - 420 KV LV winding - 15.75 KV |
| Rated Current | : | HV winding - 285.9 A LV winding - 7624.7 A |
| Connections | : | HV winding - Star LV winding - Delta |
| Vector Group | : | YNd1 |
| Type of Cooling | : | ONAN/ONAF/OFAF |
| No. x capacity of cooling units | : | 2 x 60% |
| No. of cooling units required for full load operation | : | 2 x 50% |
| Cooling system Fan Motor | : | Make : Alstom Qty : 4 W + 1 S Rating : 0.7 kW |
| Cooling system oil Pump | : | Make : Flow Well Qty : 1 W + 1 S Rating : 4.4 kW |
| Winding Insulation | : | Type - Cellulose Based Class - Class A |
| Tap Changer | : | Type - Off Circuit Tap Changer Manufacturer - Paragon , Mumbai |

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|-------------------------------|---|--|
| X / R ratio | : | 42 approx |
| Winding Resistance | : | HV winding - 0.92 ohm per phase LV winding - 0.00367 ohm per phase |
| Approximate max. flux density | : | 1.60 Wb/m ² |
| HV Bushings | : | Manufacture - CGL Type - OIP Condensor Max. creepage distance - 25mm/KV Rating : 420 KV- 800A Reference Standard - IS 2099 |
| LV Bushings | : | Manufacture - Alstom Type - Porcelain , Oil filled Max. creepage distance - 25mm/KV Rating : 24 KV- 12500A (min.) Reference Standard - IS 2099 |
| HV Neutral Bushings | : | Manufacture - CGL Type - Porcelain , Oil communicating Rating : 36 KV- 630A (min.) Reference Standard - IS 2099 |
| Coolers (Radiator Banks) | : | Total weight with Oil - 31000 Kgs Total weight without oil - 23400 Kgs Thickness of radiator fins - 1.2 mm Type of mounting - Separately mounted |
| Gas detection device | : | Manufacturer - ATVUS/PRAYOG Type - 3 Inch , Double Float |
| Fault Pressure Device | : | Manufacturer - Sukrut Type - Self resetting Number Provided - one (1) Operating Pressure - 8 psi |
| Winding - Type | : | Type of winding - Disc/Layer/Helical Current density at rated load for HV winding- 3.5A/mm ² Current density at rated load for LV winding- 3.5A/mm ² |
| Winding temp. Indicator | : | Manufacturer - Perfect Control Model no. - PC 171 Accuracy - 1.50 % |
| Transformer core details | : | Net core area - 7000 cm ² Core material & grade used - CRGO Silicon Steel Thickness of stamping - 0.27 |
| Transformer Oil | : | As per IS 335 |
| Approximate volume of Oil | : | 68100 Litres |

| | | |
|--|---|---|
| Approximate overall dimensions (L x B x H) | : | 15100 x 10000 x 10500 mm |
| Location | : | Gas Turbine Building |
| Quantity | : | 1 No. |
| Cooling | : | ONAN/ONAF/OFAF |
| Voltage (KV) HV/LV | : | 420 / 15.75 |
| BIL (KVP) HV/LV | : | 1300 / 125 |
| No. of phases | : | 3 Phase |
| Frequency | : | 50 Hz |
| Connection & Symbol | : | Star/Delta - YNd1 |
| Location | : | Ground mounted |
| Mounting | : | Mounted on roller assembly |
| Type of Conservator | : | COPS |
| Type of Tank | : | Bell Tank |
| Type of Tap charger | : | Off circuit , Paragon Associates make , 132 KV , 400A , 5 Position |
| Location of Tap charger | : | In-Tank |
| Tank Base construction | : | Roller assembly |
| Cooling Plant | : | Radiator with Fans & Pumps |
| Cooler Mounting | : | Radiator with isolation valves.Fans mounted on radiators |
| Type of bushing | : | HV - 420 KV / 800A Condensor type bushing HV N - 36 KV / 2000A Porcelain type bushing LV - 24 KV / 12500A Oil filled type bushing |
| Vaccum withstand level for tank | : | Full Vaccum |
| Oil filled Vs. Nitrogen filled despatch | : | N2 Filled |
| Integral Vs. Bolted Jacking pad | : | Intergral |
| Oil sampling arrangement | : | Top & bottom sampling valve provided on the tank |
| Control panels | : | Marshalling Box & OLTC Motor drive Unit |
| Reference Documents | : | GA Drg no - T61B 9046F Rating & Diagram Plate - Drg no - T62B 3168F Foundation detail - Drg no - T63B 8791 H Valve schedule plate - Drg no - T62B3248H |
| UNIT AUXILIARY TRANSFORMER | | |
| Rating | : | 21 MVA |
| Manufacturer | : | Crompton Greaves ,Kanjur |
| Service | : | Outdoor |

| | | |
|---|---|---|
| Duty | : | Continuous |
| Designation | : | Oil filled |
| Rating ONAN/ONAF | : | 16.8/21 |
| Rated Voltage | : | HV Winding - 15.75 KV LV winding - 6.9 KV |
| Rated Current | : | HV Winding - 769.8 A LV winding - 1757.2 A |
| Connections | : | HV Winding - Delta LV winding - Star |
| Vector Group | : | Dyn11 |
| No. x capacity of cooling units | : | 2 x 50% |
| No. of cooling units required for full load operation | : | 2 x 50% |
| Make of Fan Motor | : | Alstom |
| Winding Insulation | : | Type - Uniform Class - Class A |
| Tap Charger | : | Type - On load Tap charger Manufacturer - Easun MR |
| Bushings (LV / HV / LV Neutral) | : | Make - JSI Type - Oil filled Porcelain type Reference Standard - IS 2099 |
| Radiator cooler banks | : | Overall dimensions - 2000 x 520 mm Total weight with oil - 4850 Kgs Total weight without oil - 3610 Kgs Thickness of radiator tubes - 1.2 mm |
| Gas detection device | : | Manufacturer - Prayog Type - Double float type |
| Fault Pressure Device | : | Manufacturer - Sukrut Type - Spring loaded Qty - 1 No. |
| Winding | : | Type - Helical/Disc |
| Winding temp. Indicator | : | Make -Precimesure Perfect control Model no. - PC 171 Accuracy - ± 2 degrees |
| Oil Temp. Indicator | : | Make -Precimesure Perfect control Model no. - PC 171 Accuracy - ± 2 degrees |
| Transformer details | : | Net core area - 1470 cm ² Core material & grade used - M4 Thickness of stamping - 0.27 mm |
| Transformer Oil | : | As per IS 335 |
| STATION AUXILIARY TRANSFORMER | | |

| | | |
|--|---|--|
| Rating & Qty | : | 2500 KVA - 1 No. 1600 KVA - 1 No. 500 KVA - 1 No. |
| Type of Transformer | : | Resin Cast dry Type |
| No. of Phases | : | Three |
| Voltage Ratio | : | 6600 / 433 |
| Frequency | : | 50 Hz |
| Connections | : | Delta / Star |
| Vector Group | : | Dyn11 |
| Tappings on Primary winding | : | ± 5% in steps of 2.5% |
| Percentage Impedance | : | For 2500 KVA - 9 % with no negative tolerance For 1600 KVA - 6.25 + IEC Tolerance For 500 KVA - 4.0 + IEC Tolerance |
| Winding Material | : | Copper |
| Type of Cooling | : | AN |
| Class of Insulation | : | F |
| Max. temp. rise in winding over 45 deg celcius ambient | : | 90 deg celcius |
| Insulation Level | : | HV : LI 60/20 AC KVp/KVrms LV : -/ 3 AC KVp/KVrms LV Neutral : -/ 3 AC KVp/KVrms |
| Applicable Standard | : | IS 2026 & IS 11171 (1985) |
| Application | : | Indoor |
| Protection class of Enclosure | : | For 2500 KVA - IP 31 For 1600 KVA - IP 31 For 500 KVA - IP 43 |
| Total Weight | : | For 2500 KVA - 7700 Kgs (+ 10 % tolerance) For 1600 KVA - 5800 Kgs (+ 10 % tolerance) For 500 KVA - 3100 Kgs (+ 10 % tolerance) |
| Reference Documents | : | For 2500 KVA : Outline GA drg no. - 2 OG 1147 & Outline GA drg no. - 2 OG 1153 For 1600 KVA : Outline GA drg no. - 2 OG 1150 & Outline GA drg no. - 2 OG 1154 For 500 KVA : Outline GA drg no. - 2 OG 1155 |
| EMERGENCY DG SET | | |
| Manufacturer of main items | | |
| Main Vendor | : | Powerica |
| Engine along with accessories | : | Cummins |
| Alternator | : | Stamford |
| Control panel | : | Powerica |

| | | |
|---|---|------------------------|
| Battery | : | Exide |
| Battery charger | : | Powerica |
| AMF Panel | : | Powerica |
| DG Breaker panel/ DG Aux. MCC | : | Powerica |
| Power output at Generator terminals at 0.8 p.f. (lag) at 50°C ambient | : | 1250KVA |
| Applicable standards | : | |
| Engine | : | ISO3046 |
| Alternator | : | IS4722 |
| Battery | : | IS7372 |
| AMF Panel | : | IS8543 |
| DG Breaker panel/ DG Aux. MCC | : | IS8543 |
| Diesel Engine | : | |
| Manufacturer and Model No. | : | KTA50G3 |
| Type | : | IC |
| No. of cycles | : | 4 cylces |
| No. of cylinders | : | 16 cylinders |
| Cylinder orientation | : | 60deg. V |
| RPM | : | 1500 rpm |
| Service | : | Prime power |
| Bore x Stroke | : | 159 mm x 159 mm |
| Piston displacement | : | 50 M3 |
| Power at design RPM | : | 1096 KW |
| Compression ratio | : | 14.5 : 1 |
| Type of cooling | : | Radiator |
| Generator | : | |
| Make | : | Stamford |
| Type | : | Brushless type |
| Service | : | Continuous |
| Capacity | : | 1250KVA |
| Voltage | : | 415V |
| Phase | : | 3 phase |
| R.P.M | : | 1500RPM |
| Power Factor | : | 0.8 lag |
| D.G AMF / DG Breaker Panel | : | |
| Make | : | Powerica |
| Type | : | Vertical free standing |
| Sheet thickness | : | 2 mm / 3mm |
| Degree of protection | : | IP52 |

| | | |
|----------------------------------|---|--|
| Wire type | : | PVC flexible |
| Voltage grade | : | 1.1KV |
| Conductor material | : | copper |
| Conductor size | : | 2.5sq.mm |
| UPS | | |
| Manufacturer | : | Emerson Network Power Pvt. Limited |
| Qty | : | 1 No. |
| Type | : | 7400 Series |
| Output rating at design ambient | : | 75 KVA |
| Input supply voltage & frequency | : | 415 V , 50 Hz |
| Batteries | | |
| Type | : | SMF Lead acid battery |
| Manufacturer | : | HBL Nife |
| End cell Voltage | : | 1.75 V |
| No. of cells | : | 192 Nos. |
| Battery backup time | : | 30 minutes |
| Battery rating | : | 320 AH |
| Material of Battery racks | : | CRCA Sheet |
| GENERATOR CIRCUIT BREAKER | | |
| Manufacturer | : | Japan AE Power Systems Corporation |
| Type | : | SF ⁶ gas, puffer type (Model No.IIB') |
| Applicable Standards | : | IEEE C37.013 |
| Cooling | : | Natural |
| Location | : | GT hall |
| Type of Service | : | Gas Turbine Generator Circuit Breaker |
| Number of poles | : | 3 Poles |
| Frequency | : | 50Hz |
| System | : | 3-phase, 3-wire |
| Type of Grounding | : | High Resistance |
| Conductor Temperature | : | 105° C (for Silver Contacts) |
| Enclosure Temperature | : | 80°C |
| Type of Drive Unit (interrupter) | : | Hydraulic |
| Degree of Protection | : | IP 54 |
| Dimensions (L X W X H), mm | : | 4190 x 3400 x 2390mm 4190 x 3400 x 2590mm |
| Weight, kg | : | 9500 Kgs |

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|-------------------------------------|---|--|
| DCS (BOP) | | |
| Make | : | Siemens , New Delhi |
| Model | : | TelepermXpadd |
| Working Platform | : | Windows XP , serverless archieve |
| I/O capacity | : | 5000 Nos. |
| Speed | : | Network Bus - 100 MBPS Data Bus -- 10 MBPS |
| FUEL SUPPLY SYSTEM | | |
| Main Vendor | : | MultitexLimited,Delhi |
| | | |
| GAS SCRUBBER SKID (MODULE 1) | | |
| Reference Documents | : | GA Drg no - WB-SKD-85-09 |
| Emergency Shutdown Valve | | |
| Service | : | At inlet of the skid |
| Make | : | Virgo , Pune |
| Model No. | : | T88300-F2-SB |
| Tag no. | : | 1CNG-402V |
| Size | : | 300 NB |
| Qty | : | 1 No. |
| MOC | : | Body & Trim - SA 216 grade WCB |
| Knock Out Drum | | |
| Qty | : | 1 No. |
| Service Fluid | : | Natural Gas |
| Specific Gravity/Density | : | 0.613 |
| Flow Rate | : | 1.5 - 21.2 Kg/Sec |
| Design Code | : | ASME Sec VIII Div. I |
| Design Pressure | : | 49 Bar |
| Design Temperature | : | 65 ⁰ C |
| Inlet size of the drum | : | 300 mm |
| Outlet size of the drum | : | 300 mm |
| Filtering Rating | : | 8 micron - 100 % 6-8 micron - 99 % 4-6 micron - 90 % |
| Pressure Drop | : | 0.5 Bar (Dirty) , 0.25 Bar (Clean condition) |
| Cyclone Tubes | : | Qty : 32 Nos. Size : OD 114 mm |
| Size | : | 864mm OD x 1325 mm height |

| | | |
|------------------------------|---|---|
| MOC | : | Housing : SA 516 Gr. 70 Filter Media : SS Nozzle : SA 106 Gr. B |
| Reference Documents | : | Drg no - WB-SKID85-PV-05-05-A1-01,R1 |
| Pressure Safety Valve | | |
| Service | : | At Scrubber |
| Make | : | SEBIM |
| Model No. | : | 6636-2-C-1.5"-F-2"-AV |
| Tag no. | : | 1CNG-405V |
| Size | : | 40 x 50 NB / 600 # x 150 # |
| Qty | : | 1 No. |
| Capacity | : | 5842 Nm ³ /Hr |
| MOC | : | Body & Bonnet - SA 216 grade WCB Nozzle & Disc - SS 316 |
| Control Valve | | |
| Service | : | At Scrubber drain line |
| Make | : | Dresser Valve India Limited |
| Model No. | : | 88-21715 |
| Tag no. | : | 1CNG-411V |
| Size | : | 25 NB |
| Qty | : | 1 No. |
| MOC | : | Body - SA 216 grade WCB Trim - SS 316 |
| N2 Purging Skid | | |
| Gas specified | : | Nitrogen |
| Qty | : | 1 No. |
| Cylinder capacity | : | 46.7 Kg/cm ³ |
| Cylinder size | : | OD 232 x 1370mm length |
| Cylinder Qty | : | 45 Nos. |
| Standard | : | As per IS 7285 |
| Type of Cylinder bottom | : | Concave Bottom |
| Cylinder working pressure | : | 150 Kg/cm ² |
| Reference Documents | : | GA drgno : WB-SKD-85-19,R1 GA drg no : WB-SKD-85-20,R1 |
| Pressure Regulator | | |
| Make | : | Gortor |
| Model No. | : | Baai R 101S |
| Size | : | 200 NB , 300 class |
| Tag No. | : | 1 CNG421 VA / VB |
| Qty | : | 2 Nos. |
| Location | : | Module 1 |

| | | |
|---|---|---|
| Type | : | Pilot Controlled , Globe Type |
| MOC | : | Body - A216 WCB Stem - 17-4PH |
| Slam Shut Valve | | |
| Make | : | Gortor |
| Model No. | : | HSV 086 |
| Size | : | 250 NB , 300 class |
| Tag No. | : | 1 CNG420 VA / VB |
| Qty | : | 2 Nos. |
| Location | : | Module 1 |
| Type | : | Pilot Controlled , Globe Type |
| MOC | : | Body - A216 WCB Stem - C-35 |
| Condensate Tank | | |
| Qty | : | 1 No. |
| Fluid | : | Condensate |
| Pressure | : | 3 Kg/cm2 |
| Temperature | : | 45 ⁰ C |
| Dimensions | : | OD 1000 mm x 2600mm length |
| MOC | : | Shell & Dished end : SA 516 grade 70 Flange : SA 105 |
| Reference Documents | : | GA drgno : WB-SKD-85-07-A,R3 GA drg no : WB-SKD-85-07-B,R3 |
| Flame Arrestor | | |
| Make | : | Precon |
| Model No. | : | PFCI/FA/2050 |
| Service Area | : | At drain tank |
| Tag No. | : | 1CNG401D |
| Qty | : | 1 No. |
| Size | : | 50NB x class 150 |
| MOC | : | Body - SA 216 grade WCB Weather Hood - SS |
| Vent Stack | | |
| Qty | : | 1 No. |
| MOC | : | IS 2062 Grade B |
| Dimensions | : | ID 610 mm x 10 mm thk x 12000 mm height |
| Reference Documents | : | GA drgno : WB-SKD-85-08 |
| NATURAL GAS FILTER SEPERATOR SKID (MODULE 2) | | |
| Reference Documents | : | GA Drg no - WB-SKD-85-10 |
| N2 Purging Skid | | |

| | | |
|---------------------------|---|---|
| Gas specified | : | Nitrogen |
| Qty | : | 1 No. |
| Cylinder capacity | : | 46.7 Kg/cm ³ |
| Cylinder size | : | OD 232 x 1370mm length |
| Cylinder Qty | : | 45 Nos. |
| Standard | : | As per IS 7285 |
| Type of Cylinder bottom | : | Concave Bottom |
| Cylinder working pressure | : | 150 Kg/cm ² |
| Reference Documents | : | GA drgno : WB-SKD-85-19,R1 GA drg no : WB-SKD-85-20,R1 |
| Condensate Tank | | |
| Qty | : | 1 No. for Module-1 |
| Fluid | : | Condensate |
| Pressure | : | 3 Kg/cm ² |
| Temperature | : | 45 ⁰ C |
| Dimensions | : | OD 1000 mm x 2600mm length |
| MOC | : | Shell & Dished end : SA 516 grade 70 Flange : SA 105 |
| Reference Documents | : | GA drgno : WB-SKD-85-07-A,R3 GA drg no : WB-SKD-85-07-B,R3 |
| Flame Arrestor | | |
| Make | : | Precon |
| Model No. | : | PFCI/FA/2050 |
| Service Area | : | At drain tank |
| Tag No. | : | 1CNG501D |
| Qty | : | 1 No. |
| Size | : | 50NB x class 150 |
| MOC | : | Body - SA 216 grade WCB Weather Hood - SS |
| Filter Sperator | | |
| Qty | : | 2 Nos. |
| Service Fluid | : | Natural Gas |
| Specific Gravity/Density | : | 0.613 |
| Flow Rate | : | 1.5 - 21.2 Kg/Sec |
| Design Code | : | ASME Sec VIII Div. I |
| Design Pressure | : | 48 Bar |
| Design Temperature | : | 50 ⁰ C |
| Inlet size of the drum | : | 300 mm |
| Outlet size of the drum | : | 300 mm |
| Filtering Rating | : | 2 micron - 99.9 % |

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| Pressure Drop | : | 0.35 Bar (dirty) , 0.2 Bar (clean Condition) |
| Filter Elements | : | Material : Glass Fibre Qty : 32 Nos. Size : OD 114 mm x 914 mm long |
| Size | : | 610mm OD x 4100 mm height |
| MOC | : | housing : SA 516 Gr. 70 Filter Media : FG + SS 316/304 Nozzle : SA 106 Gr. B |
| Reference Documents | : | Drg no - WB-SKID-85-PV-05-06-A1-01,R1 |
| Pressure Safety Valve | | |
| Service | : | At Filter Separator |
| Make | : | SEBIM |
| Model No. | : | 6636-2-C-1.5"-G-2"-AV |
| Tag no. | : | 1CNG-507VA & VB |
| Size | : | 40 x 65 NB / 300 # x 150 # |
| Qty | : | 2 Nos. |
| Capacity | : | 5842 Nm ³ /Hr |
| MOC | : | Body & Bonnet - SA 216 grade WCB Nozzle & Disc - SS 316 |
| Control Valve | | |
| Service | : | At Filter Separator drain line |
| Make | : | Dresser Valve India Limited |
| Model No. | : | 88-21715 |
| Tag no. | : | 1CNG-513VA / VB ,517 VA / VB |
| Size | : | 25 NB |
| Qty | : | 4 Nos. |
| MOC | : | Body - SA 216 grade WCC Trim - SS 316 |
| BURN PIT SKID | | |
| Pipe | : | 25 NB , Sch 80 as per ASTM A 106 Gr. B - 3.5 Mtrs. 50 NB , Sch 80 as per ASTM A 106 Gr. B - 2 Mtrs. |
| Elbow | : | 25 NB , 3000 class - 7 Nos. 50 NB , 3000 class - 5 Nos. |
| Tee | : | 25 NB , 3000 class - 1 No. 50 NB , 3000 class - 1 No. |
| Reference Documents | : | GA Drg no - WB-SKID-85-21 |
| AC SYSTEM | | |
| Main Vendor | : | Voltas Limited , Hyderabad |
| COOLING TOWER | | |

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| Make | : | Paharpur Cooling Tower , Kolkata |
| Type , Model No. | : | Induced Draft cross flow , 3851 |
| Service area | : | Control Building |
| Designation | : | 1CHV401AA & 1CHV401AB |
| Quantity | : | 2 Nos.(1W + 1S) |
| Design Cooling Capacity | : | 70 TR |
| Design ambient wet bulb temp. | : | 28.3 dec C |
| Water Flow rate | : | 65 m3/hr |
| Hot water inlet Temp. | : | 32.2 deg C |
| Cold water temp. | : | 36.2 deg C |
| MOC | : | Fill arrangement,fill& Drift eliminators - PVC Casing - FRP Inlet Louvers - PVC integral with fill Fan Blade - Cast Alumimium |
| Motor | : | Make -Paharpur Rating - 1.5 Kw Frame Size : 90L |
| Water Losses | : | Evaporation losses - 0.67 % Drift losses - 0.01 % Make up water Quantity/size/quick fill - 0.9/50mm/50mm |
| Air Quantity | : | 7.75 m3/sec |
| Noise level | : | 85 dB |
| Fan Tip Speed | : | 1366 |
| Weight | : | Bare - 454 Kgs Operating - 1256 Kgs |
| Fan Capacity | : | 10 m3/sec |
| Reference Documents | : | Data Sheet no. - KON 02 CT DS02 GA Drg no. - P91/3008 & P92-3032 |
| CONDENSOR | | |
| Make | : | Voltas Limited,Dadra |
| Service area | : | Control Building (Control room,control equipment room, UPS room,Shiftsupervisor,E&I lab |
| Designation | : | 1CHV404AA & 1CHV404AB |
| Model No. | : | 9076 |
| Type | : | Shell & Tube |
| Quantity | : | 1 W + 1 S |
| Refrigerent | : | R-22 |
| Refrigerent storage capacity | : | 68 Kgs |

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| MOC | : | Shell : IS 2062 Grade A Tube : Integrally finned seamless copper tubes per with C12200 Head & water box : Cast iron as per IS 210 |
| Main Dimensions | : | Shell : OD 406 mm x 8 mm thk Tube : 18 mm OD x 1.1 mm thk x 2134 mm length |
| No. of Tubes | : | 98 nos. (no. of passes - 2) |
| Hot water inlet Temp. | : | 32.2 deg C |
| Cold water temp. | : | 36.2 deg C |
| Water velocity in tubes | : | 2 M/s |
| Circulating water quantity required | : | 290US GPM |
| Maximum condensor capacity | : | 400US GPM |
| Condensing Temp. | : | 110 deg F |
| Maximum working pressure | : | Refrigerent side - 20.5 bar (g) Water Side -10 Bar |
| Condensor Motor | : | Make - ABB Rating - 55 kW Frame Size - HX+250MB4 Insulation class - F Dimensions - 1100(L) x 650(B) x 910(H) mm Type - Sq. cage induction motor Ref. Data Sheet no : KON 02 EM DS 012B & GA Drg no - 3GYN 490851/490777 |
| Reference Documents | : | Data Sheet no. - KON 02 CD DS015 |
| COMPRESSOR | | |
| Make | : | Voltas Limited |
| Service area | : | Control Building (Control room,control equipment room, UPS room,Shiftsupervisor,E&I lab |
| Designation | : | 1CHV403CA/1CHV403CB |
| Model No. | : | 5066 |
| Capacity | : | 70 TR |
| Type | : | Open / Reciprocating |
| Quantity | : | 1 W + 1 S |
| Working pressure | : | 17 Kg/cm ² |
| Start | : | Partly Loaded |
| Weight | : | Compressor - 434 Kgs Motor - 360 Kgs |
| Refrigerent | : | R-22 |
| Operating speed | : | 1450 rpm |

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| Motor | : | Make - ABB Rating - 55 kW , 4 Pole |
| Make & Grade of oil used | : | ServofrizGrd 68 |
| Cylinder Construction | : | No. of Cylinders - 6 with 'V' type alignment Bore x stroke of cylinder - 3.10 x 53.7/16" |
| MOC | : | Compressor Body,Cylinder and Cylinder Liner - Cast iron as per IS 210 Grade FG 260 Piston - Cast iron as per IS 210 Grade FG 300 Crankshaft - ASTM 100/70 Gr 700/2 IS 1865 |
| Reference Documents | : | Data Sheet no - KON 02 CP DS 014 |
| BASKET STRAINER | | |
| Make | : | Jaypee,Newdelhi |
| Type | : | Basket (simplex) |
| Purpose | : | AC Cooling Water |
| Mesh Size | : | 20 mesh |
| Size | : | 100 NB |
| Quantity | : | 2 Nos. |
| Designation | : | 1CHV414MA & 1CHV414MB |
| Flow rate | : | 65.85 m3/hr |
| MOC | : | Body - MS fabricated to IS 2062 Wire Mesh - SS 304 |
| Pressure Drop | : | Clean condition - 1 MWC 50% choked condition - 2 MWC |
| Working pressure | : | 4-5 Bar |
| Reference Documents | : | Data Sheet no - KON 02 PV DS 06F Drg No - JPI/ESBS/VLTS |
| AIR HANDLING UNIT | | |
| Make & Type | : | Voltas (V-500) & Double skin ,Draw through |
| Service area | : | Control Building |
| Designation | : | 1CHV400XA & 1CHV400XB |
| Quantity | : | 2 Nos.m (1 W + 1 S) |
| Dimensions | : | 3200 mm x 3250 mm x 2250 mm (L x W x H) |
| Total operating weight | : | 3500 Kgs |
| Thickness of casing | : | 25 mm |
| No. of sections | : | 3 # (fan , 6 Row Coil & Pre-filter section) |

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| Cooling Coil | : | Type - DX type Cooling capacity - 211680 Kcal/hr Air Quantity - 47600 m3/hr No. of rows - 6 No. of circuits - 30 per coil MOC of coils - Copper C12200 MOC of fins - Aluminium |
| AHU Motor | : | Make - ABB Rating - 18.5 kW Frame Size - HX+180MLB4 Insulation class - F Dimensions - 865(L) x 500(B) x 655(H) mm Type - Sq. cage induction motor Ref. Data Sheet no : KON 02 EM DS 012C & GA drg no - 3GYN 490370/453117 |
| Centrifugal Fans | : | Make/Model - Kruger FDA 900T Type - DIDW Qty - 1 No. Selected capacity - 47600 CMH Impeller Speed - 451 rpm MOC - Impeller & casing (GI Sheet) , Shaft (EN-8) Motor - 18.5 kW |
| Reference Documents | : | Data Sheet No - KON 02 AH DS 016 GA Drg no - V 500 |
| CONTROL BUILDING FIRE DAMPER | | |
| Manufacturer | : | TSC Instruments |
| Designation | : | 1CHV 408Y to 1CHV412 Y |
| Quantity | : | 2100 x 900 mm - 1 No. (Double leaves) 3000 x 900 mm - 1 No. (Double leaves) 0600 x 450 mm - 2 Nos. (Single leaf) 0450 x 700 mm - 2 Nos. (Single leaf) |
| Type | : | Rectangular low leakage |
| MOC | : | Frame - 14 G sheet , MS as per IS 1079 Louver - 16 G sheet , MS as per IS 1079 Shaft - MS as per IS 9550 grade 1 |
| Fusible link melting temp. | : | 79 deg Celcius |
| Reference Documents | : | GA Drg no - DR/TSC-2/126/04-05/1 |
| DM PLANT FIRE DAMPER | | |
| Manufacturer | : | George Rao &Company,Mumbai |
| Type | : | Fusible Link Operated Fire damper |

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| MOC | : | Frame - 16G GI Louvers - 16 G GI Shaft - MS plated |
| Fusible Link | : | Manufacturing Std - UL555 Material - Copper plates |
| GATE VALVE | | |
| Make | : | H Sarkar |
| Purpose | : | AC Cooling Water |
| Type | : | Outside screw & yoke with position indicator |
| Design Standard | : | IS 14846 |
| Pressure rating | : | Class 125 PN 1.0 |
| Size | : | 100 NB |
| Quantity | : | 12 Nos. |
| Designation | : | 1CHV403VA & VB,1CHV404VA & VB,1CHV405VA & VB,1CHV406VA & VB,1CHV409VA & VB 1CHV411VA & VB |
| MOC | : | Body , Wedge , Hand wheel - CI as per IS 210 FG 260 Stem , Seat ring - SS AISI 410 |
| Reference Documents | : | Data Sheet no - KON 02 PV DS 06C |
| GLOBE VALVE | | |
| Make | : | H Sarkar |
| Purpose | : | AC Cooling Water |
| Type | : | Outside screw & rising spindle |
| Design Standard | : | BS 5152 |
| Pressure rating | : | Class 125 PN 1.0 |
| Size | : | 100 NB |
| Quantity | : | 04 Nos. |
| Designation | : | 1CHV408VA & VB and 1CHV410VA & VB |
| MOC | : | Body ,Wedge,Hand wheel - CI as per IS 210 FG 260 Stem , Seat ring - SS AISI 410 |
| CHECK VALVE | | |
| Make | : | H Sarkar |
| Purpose | : | AC Cooling Water |
| Type | : | Swing |
| Design Standard | : | IS 5312 |
| Pressure rating | : | Class 125 PN 1.0 |
| Size | : | 100 NB |

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| Quantity | : | 02 Nos. |
| Designation | : | 1CHV407VA & VB |
| MOC | : | Body , Cover & Flap - CI as per IS 210 FG 260 Hinge Bracket - ASTM A 216 grade WCB |
| Reference Documents | : | Data Sheet no - KON 02 PV DS 06D |
| GM GATE VALVE | | |
| Make | : | SANT |
| Purpose | : | AC water make up & Quick fill |
| Type | : | Inside screw rising stem |
| Design Standard | : | IS 778 |
| Pressure rating | : | Class 1 PN 1.0 |
| Size | : | 50 NB |
| Quantity | : | 13 Nos. |
| Designation | : | 1CHV400VA & VB,1CHV401VA & VB,1CHV402VA & VB,1CHV416VA & VB,1CHV417VA,1CHV418VA & VB , 1CHV420 VA & VB |
| MOC | : | Body,Bonnet,wedge,gland - Leaded Tin Bronze Spindle - Forged Brass |
| Reference Documents | : | Data Sheet no - KON 02 PV DS 06B |
| GM GLOBE VALVE | | |
| Make | : | SANT |
| Purpose | : | AC refrigerent piping liquid line |
| Type | : | Inside screw rising stem |
| Design Standard | : | IS 778 |
| Pressure rating | : | Class 2 PN 1.0 |
| Size | : | 40 NB |
| Quantity | : | 06 Nos. |
| Designation | : | 1CHV412VA & VB,1CHV413VA & VB 1CHV415VA & VB |
| MOC | : | Body,Bonnet,disc,gland - Leaded Tin Bronze Spindle - Forged Brass |
| Reference Documents | : | Data Sheet no - KON 02 PV DS 06A |
| PRE FILTERS | | |
| Make | : | Puromatic |
| Service | : | Control Building |
| Location | : | Air Handling Unit |
| Quantity | : | 15 Nos. |
| Size | : | 610 x 610 x 50 mm |

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| Flow rate through each filter | : | 3170 CMH |
| Maximum face velocity | : | 2.5 m/s |
| Pressure Drop | : | Clean condition : 3 -4 MWC 50% choked condition - 7 MWC |
| MOC | : | 16 G Aluminium |
| Testing Code | : | EN779/ASHRAE 52-76 |
| Reference Documents | : | Data Sheet no - KON 02 PF DS 011A |
| FINE FILTERS | | |
| Make | : | Puromatic |
| Location | : | Plenum at the discharge of Air Handling Unit |
| Quantity | : | 24 Nos. |
| Size | : | 610 x 610 x 305 mm |
| Designation | : | 1CHV418F |
| Flow rate through each filter | : | 1980 CMH |
| Maximum face velocity | : | 2.5 m/s |
| Pressure Drop | : | Clean condition : 6 MWC 50% choked condition - 10 MWC |
| MOC | : | 16 G Aluminium |
| Testing Code | : | EN779/ASHRAE 52-76 |
| Reference Documents | : | Data Sheet no - KON 02 PF DS 011B |
| CONDENSOR WATER COOLING PUMP | | |
| Make | : | Beacon Weir |
| Type | : | Back pull out type,single stage |
| Service | : | Condensor water cooling |
| Designation | : | 1CHV405PA & PB |
| Quantity | : | 1 W + 1 S |
| Model No. | : | CNW-80-160 |
| Rated Flow | : | 65.85 m ³ /hr |
| Total developed head at rated flow | : | 25.41 MWC |
| Pump Efficiency | : | 0.72 |
| Design Standard | : | ISO 2858/DIN 24256 (manufacturing) and HIS testing as per IS 9137 Class C |
| Type of impeller | : | Closed |
| Casing | : | Radially split |
| MOC | : | Casing - 2% Ni cast iron as per IS 210 Gr FG 260 Impeller - BS 1400 LTB-2 Bronze Shaft & Shaft sleeve - SS AISI 410 |

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| Motor | : | Make - ABB Rating - 7.5 kW Frame size - HX+132SMB2 Reference document - Data Sheet no- KON 02 EM DS 012A |
| Reference Documents | : | Data Sheet no - KON 02 PM DS 01 GA Drg no - 188533 |
| PACKAGE AC | | |
| Make | : | Voltas Limited, Dadra |
| Service area | : | DM plant |
| Model No. | : | DPUASC85 |
| Quantity | : | 3 Nos. |
| Tag nos. | : | 1CHV417XA,XB& XC |
| Refrirerent used | : | R-22 |
| Capacity of each unit | : | 8.5 TR |
| Dimensions (L x B x H) | : | 900 x 642 x 1855 mm |
| Compressor | : | Make - Copeland Zr Scroll Motor rating - 9.6 kW |
| Condensor | : | Type - Air Cooled Model no. - DC 85S MOC of tube - Copper Dimensions - 1325 x 460 x 750 mm |
| Blower Fan | : | Type -Centrifugal forward curved Capacity - 4000 m3/hr Motor rating - 0.75 kW |
| Cooling Coils | : | Type - Direct Expansion MOC of tube - Copper |
| Filters | : | Make - Voltas Limited Particle size - 10 microns |
| Reference Documents | : | Data Sheet no - KON 02PF DS 011A |
| ACW SYSTEM | | |
| ACW PUMP | | |
| Supplier | : | WPIL , Kolkata |
| Quantity | : | 3 Nos. (2W + 1S) |
| Type | : | Vertical Wet Pit non Pull Out type |
| Capacity | : | 1540 m3/hr |
| Model No. | : | F 20 TC |
| Total Head at rated capacity | : | 33 MLC |
| Design & testing standard | : | HIS |
| Pump rated Speed | : | 1485 rpm |
| Weight of pump | : | 2370 Kgs |

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| MOC | : | Impeller - CF 8M Suction bell & Bowl - 2% NiCl IS 210 FG 260 Impeller Shaft -SS 410 |
| Reference drawing | : | Data Sheet no : WPIL/ACW/01 GA drg no : SK-5864-B |
| Motor | : | Make - Alstom , Kolkata Rating - 180 kW |
| RUBBER EXPANSION JOINTS | | |
| Manufacturer | : | M/s Cori Engineers,Chennai |
| Size,Location& Qty | : | 400 ID at ACW Pump Discharge – 3 Nos. |
| Material | : | IS 2062 grade B |
| Design Pressure | : | 5.1 Kg/cm ² |
| Design Temp. | : | Max. 50 deg C |
| Test Vaccum | : | 730 mm of Hg |
| Shore Hardness | : | 65 ± 5 deg Sh. A |
| Flowing Medium | : | Cooling Water |
| Axial Compression, elongation & lateral deflection | : | 12 mm |
| Torsional movement & angular deflection | : | 2 Deg |
| Reference Drawing | : | CEPL/2446/L&T/1011/01,R6 (2 Sheets) |
| ACW STRAINER | | |
| Make | : | Otoklin , Mumbai |
| Quantity | : | 1 No. |
| Model No. | : | 750 NBDBF |
| Reference drawing | : | Drg no - L&T/GA/DBF/9887 |
| TRASH RACK | | |
| Supplier | : | M/s Indoasiatic,New Delhi |
| Quantity | : | 3 sets |
| No of Pieces / set | : | 3 nos. / set |
| Size | : | 7.0 m x 4.6 m |
| Size of opening between horz. & Vertical bars | : | 100 mm |
| MOC | : | IS: 2062 Gr B Galvanised (Hot dip galvanised) |
| Location | : | CW Pump bay |
| Reference Drawing | : | Drg no : IAE/L&T/KCCPP/012,R2 |
| STOP LOG GATES | | |
| Supplier | : | M/s Indoasiatic,New Delhi |
| Quantity | : | 1 set |

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| No. of pieces/set | : | 4 nos. / set |
| Type | : | Side sealing using single musical note seal and bottom seal using plain rubber seal |
| Size | : | 6.3 m X 1.1 m |
| MOC | : | Is: 2062 Gr B Galvanised (Zinc Spray) |
| Location | : | ACW Pump bay |
| Reference Drawing | : | Drg no : IAE/L&T/KCCPP/003,R2 Drg no : IAE/L&T/KCCPP/006,R3 Drg no : IAE/L&T/KCCPP/007,R3 Drg no : IAE/L&T/KCCPP/013,R3 |
| EFFLUENT TREATMENT PLANT | | |
| Main Vendor | : | Doshi Ion Exchange , Ahmedabad |
| CAUSTIC DOSING TANK | | |
| Make | : | Unimech |
| Qty | : | 2 Nos. |
| Tag nos. | : | 1CET406TA,1CET406TB |
| Position | : | Vertical |
| Orientation | : | Cylindrical with flat removable Top |
| Capacity | : | 500 Litres |
| Dimensions | : | Inside Dia - 900 mm Height - 1200 mm |
| MOC | : | MS Rubberlined |
| Reference Documents | : | GA drg no - 1720-VFD-02 |
| ACID DOSING TANK | | |
| Make | : | Unimech |
| Qty | : | 2 Nos. |
| Tag nos. | : | 1CET407TA,1CET407TB |
| Size | : | 900 mm ID x 1200 mm Height |
| MOC | : | MS Rubberlined |
| Capacity | : | 2100 Litres |
| Weight | : | Filled - 3.1 T Empty - 1.0 T |
| Reference Documents | : | GA drg no - 1720-VFD-01 |
| PRIMING TANK | | |
| Make | : | Unimech |
| Qty | : | 2 Nos. |
| Tag nos. | : | 1CET410TA,1CET410TB |
| Size | : | 1600 mm ID x 1500 mm Height |
| MOC | : | MS Rubberlined as per IS 4682 Part 1 |
| Capacity | : | 2100 Litres |

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| Weight | : | Filled - 3.1 T Empty - 1.0 T |
| Reference Documents | : | GA drg no - 1720-MLC-03 |
| AGITATORS FOR CAUSTIC DOSING TANK | | |
| Make | : | Vallabh Das & Sons , Mumbai |
| Qty | : | 2 Nos. |
| Tag nos. | : | 1CET408CA & 1CET409CB |
| Model | : | VS/310 |
| Sevice | : | Caustic Dosing Tank |
| Type | : | Impeller |
| Agitator Mounting | : | Vertical |
| Main Dimensions | : | Impeller dia - 425 mm Shaft length - 1000 mm Shaft Dia - 25 mm |
| Agitator rotation speed | : | 100 rpm |
| MOC | : | Blade & Shaft - SS 316 |
| Motor | : | Make - CGL Rating - 0.37 KW RPM - 1450 |
| Reference Documents | : | Data Sheet no : GMD-04 Drg no : VS/310 |
| BLOWER FOR EHT & SUMP PIT-III | | |
| Make | : | Kay International , Sonapat |
| Model no. | : | 610 AC |
| Tag nos. | : | 1CET407CA & CB |
| Qty | : | 2 Nos. |
| Type | : | Twin Lobe |
| Capacity | : | 13.3 m3/min |
| Pressure | : | 4.5 MWC |
| MOC | : | Casing & Lobe - CI as per IS 210 Grade FG 260 Shaft- 8 17 M17,BS 970 Gear - 8 15 M40,BS 970 |
| Motor Details | : | Rating - 18.75 kW Make - Alstom Type - Squirrel cage,foot mounted |
| Reference Documents | : | Data Sheet no : GMD-015 GA drg no : K-GA-0610AH053A3 |
| EFFLUENT DISPOSAL PUMP | | |
| Make | : | SU Motors , Mumbai |
| Tag nos. | : | 1CET406P-A,1CET406P-B |

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| Model no. | : | CPP2:250 x 200-400 |
| Sr. No. | : | 59969 & 59970 |
| Head | : | 15 MLC |
| Efficiency | : | 0.52 |
| Type | : | Horizontal back pull out end suction top design |
| Qty | : | 2 Nos. |
| Capacity | : | 600 m3/hr |
| MOC | : | Casing & Impeller - CI as per IS 210 FG 260 rubberlined Shaft & Shaft sleeve - SA 479 Gr. 410 |
| Motor | : | Rating - 55 kW Make : Alstom Frame Size : ND 200L Ref. Data Sheet no - GMD-012 |
| Reference Documents | : | Data Sheet no : 1720-GMD-011 GA drg no : CH-90 CC- 1480/6 |
| EFFLUENT TRANSFER PUMP | | |
| Make | : | SU Motors , Mumbai |
| Tag nos. | : | 1CET401P-A,1CET401P-B |
| Model no. | : | CPV1:80 x 50-315 |
| Sr. No. | : | 59944 & 59945 |
| Head | : | 32 MLC |
| Efficiency | : | 0.39 |
| Type | : | Vertical submerged centrifugal type |
| Qty | : | 2 Nos. |
| Capacity | : | 30 m3/hr |
| MOC | : | Casing & Impeller - 2% Ni CI (IS 210 FG 260 rubberlined) Shaft & Shaft sleeve - SA 479 Gr. 410 |
| Motor | : | Rating - 11 kW Make : Alstom Frame Size : DDE Ref. Data Sheet no - GMD-002 |
| Reference Documents | : | Data Sheet no : 1720-GMD-001 GA drg no : CH-90 CC- 1408/1 |
| VERTICAL SUMP PUMP FOR HOLDING PIT 1A | | |
| Make | : | SU Motors , Mumbai |
| Tag nos. | : | 1CET402P-A,1CET402P-B |
| Model no. | : | CPV1:50 x 40-315 |
| Sr. No. | : | 59948 x 59949 |
| Head | : | 27 MLC |
| Efficiency | : | 0.3 |

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| Type | : | Vertical submerged centrifugal type |
| Qty | : | 2 Nos. |
| Capacity | : | 10 m ³ /hr |
| MOC | : | Casing & Impeller - 2% Ni CI (IS 210 FG 260 rubberlined) Shaft & Shaft sleeve - SA 479 Gr. 410 |
| Motor | : | Rating - 3.7 kW Make : Alstom Frame Size : DDE Ref. Data Sheet no - GMD-004 |
| Reference Documents | : | Data Sheet no : 1720-GMD-003 GA drg no : CH-90 CC- 1408/2 |

VERTICAL SUMP PUMP FOR SUMP PIT 1B

| | | |
|---------------------|---|---|
| Make | : | SU Motors , Mumbai |
| Tag nos. | : | 1CET405P-A,1CET405P-B |
| Model no. | : | CPV1:50 x 40-315 |
| Sr. No. | : | 59946 & 59947 |
| Head | : | 28 MLC |
| Efficiency | : | 0.19 |
| Type | : | Vertical submerged centrifugal type |
| Qty | : | 2 Nos. |
| Capacity | : | 05 m ³ /hr |
| MOC | : | Casing & Impeller - 2% Ni CI (IS 210 FG 260 rubberlined) Shaft & Shaft sleeve - SA 479 Gr. 410 |
| Motor | : | Rating - 3.7 kW Make : Alstom Frame Size : DDE Ref. Data Sheet no - GMD-006 |
| Reference Documents | : | Data Sheet no : 1720-GMD-005 GA drg no : CH-90 CC- 1408/3 |

VERTICAL SUMP PUMP FOR SUMP PIT II

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| Make | : | SU Motors , Mumbai |
| Tag nos. | : | 1CET403P-A,1CET403P-B |
| Model no. | : | CPV1:100 x 80- 250 |
| Serial No. | : | 59963 & 59964 |
| Head | : | 20 MLC |
| Efficiency | : | 0.68 |
| Type | : | Vertical submerged centrifugal type |
| Qty | : | 2 Nos. |
| Capacity | : | 55 m ³ /hr |

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| MOC | : | Casing & Impeller - 2% Ni CI (IS 210 FG 260 rubberlined) Shaft & Shaft sleeve - SA 479 Gr. 410 |
| Motor | : | Rating - 7.5 kW Make : Alstom Frame Size : DDE Ref. Data Sheet no - GMD-008 |
| Reference Documents | : | Data Sheet no : 1720-GMD-007 GA drg no : CH-90 CC- 1408/4 |
| VERTICAL SUMP PUMP FOR SUMP PIT III | | |
| Make | : | SU Motors , Mumbai |
| Tag nos. | : | 1CET404P-A,1CET404P-B |
| Model no. | : | CPV1:50 x 40- 250 |
| Serial No. | : | 59950 & 59951 |
| Head | : | 20 MLC |
| Efficiency | : | 0.3 |
| Type | : | Vertical submerged centrifugal type |
| Qty | : | 2 Nos. |
| Capacity | : | 6 m3/hr |
| MOC | : | Casing & Impeller - 2% Ni CI (IS 210 FG 260 rubberlined) Shaft & Shaft sleeve - SA 479 Gr. 410 |
| Motor | : | Rating - 2.2 kW Make : Alstom Frame Size : DDE Ref. Data Sheet no - GMD-010 |
| Reference Documents | : | Data Sheet no : 1720-GMD-009 GA drg no : CH-90 CC- 1408/5 |
| ORIFICE PLATE ASSEMBLY | | |
| Manufacturer | : | Micro Precision , Faridabad |
| Qty | : | 1 No. |
| Tag no. | : | 1CFEET 401 |
| Size | : | 300 NB, class 150 |
| MOC | : | SS 316 |
| Reference Documents | : | Data Sheet no : 1720-INST-09 GA Drg no : MOB-CR-3092 |
| OIL WATER SEPERATOR | | |
| Make | : | K Pack Systems |
| Qty | : | 1 No. |
| Tag no. | : | 1CET409T |
| Service | : | Oil Water Seperator |
| Type | : | TPI oil water seperator |

| | | |
|---------------------------------------|---|---|
| Total Flow | : | 45 m3/hr |
| Design Pressure | : | 0.31 Kg/cm2 |
| Oil removal efficiency | : | 0.98 |
| Dimensions (L x B x H) | : | 2700 x 2000 x 3100 mm |
| Reference Documents | : | Data Sheet no : GMD-013 GA Drg no : KPS/DOSHI/TPI/01 & 2 |
| DM PLANT | | |
| Main Vendor | : | Doshi Ion Exchange , Ahmedabad |
| TANKS / VESSELS | | |
| Weak Acid Cation vessel | | |
| Manufacturer | : | Vihim , Ahmedabad |
| Qty | : | 2 Nos. |
| Tag No. | : | 1CDW400A-A & B |
| Working Pressure | : | 6 Kg/cm2 |
| Dimensions (ID x Height) | : | 1700 x 2600 mm |
| MOC | : | IS 2062 Grade B |
| Reference Documents | : | Drg no : 1603-MLC-04 |
| Activated Carbon Filter vessel | | |
| Manufacturer | : | Vihim , Ahmedabad |
| Qty | : | 2 Nos. |
| Tag No. | : | 1CDW401F-A & B |
| Working Pressure | : | 6 Kg/cm2 |
| Dimensions (ID x Height) | : | 1800 x 2300 mm |
| MOC | : | IS 2062 Grade B |
| Reference Documents | : | Drg no : 1603-MLC-03 |
| Caustic dilution tank for SBA | | |
| Manufacturer | : | Unimech , Ahmedabad |
| Qty | : | 1 No. |
| Tag No. | : | 1CDW403A |
| Working Pressure | : | Atmospheric |
| Dimensions (ID x Height) | : | 1200 x 1650 mm |
| MOC | : | IS 2062 Grade B |
| Reference Documents | : | Drg no : 1603-MLC-17 |
| Caustic dilution tank for MB | | |
| Manufacturer | : | Unimech , Ahmedabad |
| Qty | : | 1 No. |
| Tag No. | : | 1CDW403TB |
| Working Pressure | : | Atmospheric |
| Dimensions (ID x Height) | : | 1200 x 1650 mm |
| MOC | : | IS 2062 Grade B |

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| Reference Documents | : | Drg no : 1603-MLC-16 |
| Caustic dilution tank for N-Pit | | |
| Manufacturer | : | Unimech , Ahmedabad |
| Qty | : | 1 No. |
| Tag No. | : | 1CDW406T |
| Working Pressure | : | Atmospheric |
| Dimensions (ID x Height) | : | 800 x 1600 mm |
| MOC | : | IS 2062 Grade B |
| Reference Documents | : | Drg no : 1603-MLC-18 |
| Acid measuring tank for N-Pit | | |
| Manufacturer | : | Unimech , Ahmedabad |
| Qty | : | 1 No. |
| Tag No. | : | 1CDW405T |
| Working Pressure | : | Atmospheric |
| Dimensions (ID x Height) | : | 800 x 1600 mm |
| MOC | : | IS 2062 Grade B |
| Reference Documents | : | Drg no : 1603-MLC-14 |
| Pressure sand filter | | |
| Manufacturer | : | Vihim , Ahmedabad |
| Qty | : | 2 Nos. |
| Tag No. | : | 1CPW400F-A & B |
| Working Pressure | : | 7.5 Kg/cm ² |
| Dimensions (ID x Height) | : | 2300 x 2000 mm |
| MOC | : | IS 2062 Grade B |
| Reference Documents | : | Drg no : 1603-MLC-02 |
| MB exchangers- A & B | | |
| Manufacturer | : | Dhara , Ahmedabad |
| Qty | : | 2 Nos. |
| Tag No. | : | 1CDW403A-A & B |
| Working Pressure | : | 4.5 Kg/cm ² |
| Dimensions (ID x Height) | : | 1100 x 2000 mm |
| MOC | : | IS 2062 Grade B |
| Reference Documents | : | Drg no : 1603-MLC-07 |
| Acid measuring tank for MB | | |
| Manufacturer | : | Vibha , Ahmedabad |
| Qty | : | 1 No. |
| Tag No. | : | 1CDW402TB |
| Working Pressure | : | Atmospheric |
| Dimensions (ID x Height) | : | 1200 x 1700 mm |
| MOC | : | IS 2062 Grade B |
| Reference Documents | : | Drg no : 1603-MLC-13 |

| Acid measuring tank for SAC | | |
|------------------------------------|---|----------------------|
| Manufacturer | : | Vibha , Ahmedabad |
| Qty | : | 1 No. |
| Tag No. | : | 1CDW402TA |
| Working Pressure | : | Atmospheric |
| Dimensions (ID x Height) | : | 1200 x 1700 mm |
| MOC | : | IS 2062 Grade B |
| Reference Documents | : | Drg no : 1603-MLC-12 |
| Morpholine dosing tank | | |
| Manufacturer | : | Vibha , Ahmedabad |
| Qty | : | 1 No. |
| Tag No. | : | 1CDW411T |
| Working Pressure | : | Atmospheric |
| Dimensions (ID x Height) | : | 500 x 1100 mm |
| MOC | : | IS 2062 Grade B |
| Reference Documents | : | Drg no : 1603-MLC-09 |
| Degasser tower | | |
| Manufacturer | : | Vibha , Ahmedabad |
| Qty | : | 1 No. |
| Tag No. | : | 1CDW402F |
| Working Pressure | : | Atmospheric |
| Dimensions (ID x Height) | : | 900 x 3300 mm |
| MOC | : | IS 2062 Grade B |
| Reference Documents | : | Drg no : 1603-MLC-04 |
| Degasser water storage tank | | |
| Manufacturer | : | Everest , Ahmedabad |
| Qty | : | 1 No. |
| Tag No. | : | 1CDW400T |
| Working Pressure | : | Atmospheric |
| Dimensions (ID x Height) | : | 3000 x 4500 mm |
| MOC | : | IS 2062 Grade B |
| Reference Documents | : | Drg no : 1603-MLC-08 |
| SAC vessels # A & B | | |
| Manufacturer | : | Dhara , Ahmedabad |
| Qty | : | 2 Nos. |
| Tag No. | : | 1CDW401A & B |
| Working Pressure | : | 6 Kg/cm ² |
| Dimensions (ID x Height) | : | 1300 x 2500 mm |
| MOC | : | IS 2062 Grade B |
| Reference Documents | : | Drg no : 1603-MLC-05 |
| SBA vessels # A & B | | |

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|----------------------------------|---|--------------------------|
| Manufacturer | : | Dhara , Ahmedabad |
| Qty | : | 2 Nos. |
| Tag No. | : | 1CDW402A & B |
| Working Pressure | : | 5 Kg/cm ² |
| Dimensions (ID x Height) | : | 1900 x 2900 mm |
| MOC | : | IS 2062 Grade B |
| Reference Documents | : | Drg no : 1603-MLC-06 |
| Bulk Acid Storage tank | | |
| Manufacturer | : | Everest , Ahmedabad |
| Qty | : | 2 Nos. |
| Tag No. | : | 1CDW401T-A & B |
| Working Pressure | : | Atmospheric |
| Dimensions (ID x Height) | : | 2500 x 3600 mm |
| MOC | : | IS 2062 Grade B |
| Reference Documents | : | Drg no : 1603-MLC-11 |
| Bulk Caustic storage tank | | |
| Manufacturer | : | Everest , Ahmedabad |
| Qty | : | 1 No. |
| Tag No. | : | 1CDW407T |
| Working Pressure | : | Atmospheric |
| Dimensions (ID x Height) | : | 2500 x 3300 mm |
| MOC | : | IS 2062 Grade B |
| Reference Documents | : | Drg no : 1603-MLC-15 |
| Hot water tank | | |
| Manufacturer | : | Unimech , Ahmedabad |
| Qty | : | 1 No. |
| Tag No. | : | 1CDW404T |
| Working Pressure | : | 4.5 Kg/cm ² |
| Dimensions (ID x Height) | : | 1900 x 2500 mm |
| MOC | : | IS 2062 Grade B |
| Reference Documents | : | Drg no : 1603-MLC-10 |
| ACF Potable water tank | | |
| Manufacturer | : | Unimech , Ahmedabad |
| Qty | : | 2 Nos. |
| Tag No. | : | 1CPW401F-A & B |
| Working Pressure | : | 7.0 Kg/cm ² |
| Dimensions (ID x Height) | : | 700 x 2200 mm |
| MOC | : | IS 2062 Grade B |
| Reference Documents | : | 1603-VFD-20 |
| PSF for potable plant | | |
| Manufacturer | : | FS Engineers , Ahmedabad |
| Qty | : | 2 Nos. |

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| Tag No. | : | 1CPW400F-A & B |
| Working Pressure | : | 7.5 Kg/cm ² |
| Dimensions (ID x Height) | : | 700 x 2200 mm |
| MOC | : | IS 2062 Grade B |
| Reference Documents | : | 1603-VFD-19 |
| PUMPS | | |
| DM PLANT SUPPLY PUMPS | | |
| Make | : | Flowmore , Ghaziabad |
| Model no | : | 5623-65 x 40 |
| Qty | : | 2 Nos. (1W + 1S) |
| Capacity | : | 36 m ³ /hr |
| MOC | : | Impeller : SS304 Casing : 2 % Ni Cl Shaft : SS 410 |
| Motor | : | Make : Kirloskar Rating : 15 kW, 2 pole Qty : 2 Nos. Frame Size : PM 160M Speed : 2935 rpm Data Sheet no : GMD-001M |
| Reference Documents | : | GMD-001 |
| DE-GASSED WATER TRANSFER PUMP | | |
| Make | : | Flowmore , Ghaziabad |
| Model no | : | 5623-65 x 40 |
| Type | : | Horizontal End Suction type |
| Tag nos. | : | 77901022K5(A) 77902022K5(A) |
| Qty | : | 2 Nos. |
| Capacity | : | 30.2 m ³ /hr |
| MOC | : | Impeller : CF8M ASTM A 743 Casing : CF8M ASTM A 743 Shaft : SS 316 |
| Motor | : | Make : Kirloskar Rating : 15 kW, 2 pole Qty : 2 Nos. Frame Size : PM 160M Speed : 2935 rpm Data Sheet no : GMD-007M |
| Reference Documents | : | GMD-007 |
| MORPHOLINE DOSING PUMP | | |
| Make | : | Milton Roy, Chennai |
| Model no | : | MRA - 13H |
| Qty | : | 2 Nos. |

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| Capacity | : | 0 to 3.5 Litres/hr |
| MOC | : | Liquid End/Head : SS 316 Diaphragm : PTFE Valve Seat : Teflon Housing : CI as per IS 210 Gr 220 |
| Motor | : | Make : Rating : 0.37 kW Qty : . Frame Size : Speed : 1440 rpm Data Sheet no : |
| Suction Strainer | : | Type : Y Type MOC : CF8M |
| Reference Documents | : | GMD-010 |
| DM REGENERATION PUMPS | | |
| Make | : | Flowmore , Ghaziabad |
| Model no | : | F5523A-75 x 50 |
| Serial Nos. | : | 77901022K5(B) 77902022K5(B) |
| Qty | : | 2 Nos. |
| Capacity | : | 25 m3/hr |
| MOC | : | Impeller : CF8M ASTM A 743 Casing : CF8M ASTM A 743 Shaft : SS 316 |
| Motor | : | Make : ABB Rating : 15 kW, 2 pole Qty : 2 Nos. Frame Size : PM 160M Speed : 2935 rpm Data Sheet no : GMD-001M |
| Reference Documents | : | GMD-008 |
| BULK CAUSTIC UNLOADING PUMPS | | |
| Make | : | SAM Pumps |
| Model no | : | TCH + N 25/130 |
| Tag nos. | : | 1CDW404P-A & B |
| Serial Nos. | : | 12951 & 12952 |
| Qty | : | 2 Nos. |
| Capacity | : | 11 m3/hr |
| MOC | : | Impeller : SS 316 Casing : SS 316 Shaft : SS 316 |

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|---|---|--|
| Motor | : | Make : Kirloskar Rating : 2.2 kW,2 pole Qty : 2 Nos. Frame Size : PM 90L Speed : 2830 rpm Data Sheet no : GMD-016 |
| Reference Documents | : | GMD-015 |
| NEUTRALISED EFFLUENT DISPOSAL PUMP | | |
| Make | : | Kishore |
| Model no | : | CHL50-315 |
| Qty | : | 2 Nos. |
| Capacity | : | 25 m3/hr |
| MOC | : | Impeller : Rubberlined CI as per IS 210 FG 260 Casing : Rubberlined CI as per IS 210 FG 260 Shaft : SS 316 |
| Motor | : | Make : ABB Rating : 15 kW,2 pole Qty : 2 Nos. Frame Size : PM 160M Speed : 2935 rpm Data Sheet no : GMD-001M |
| Reference Documents | : | GMD-016 |
| POTABLE WATER SUPPLY PUMP | | |
| Make | : | SAM Pumps |
| Model no | : | CPC-40/260 |
| Model no | : | 1CPW400P-A & B |
| Serial Nos. | : | 12949/50 |
| Qty | : | 2 Nos. |
| Capacity | : | 11 m3/hr |
| MOC | : | Impeller : SS304 Casing : 2 % Ni CI Shaft : SS 410 |
| Motor | : | Make : Kirloskar Rating : 9.3 kW,2 pole Qty : 2 Nos. Frame Size : PM 160M Speed : 2935 rpm Data Sheet no : GMD-002M |
| Reference Documents | : | GMD-002 |
| ACID UNLOADING PUMP | | |
| Make | : | Anticorrosive Equipment |
| Model no | : | EXP-55CT |
| Model no | : | 1CDW402P-A & B |
| Serial Nos. | : | 04503EX561609/10 |

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| Qty | : | 2 Nos. |
| Capacity | : | 11 m ³ /hr |
| MOC | : | Impeller : SS304 Casing : 2 % Ni Cl Shaft : SS 410 |
| Motor | : | Make : CGL Rating : 3.7 kW Speed : 1440 rpm Data Sheet no : GMD-002M |
| Reference Documents | : | GMD-002 |
| DM WATER TRANSFER PUMP | | |
| Supplier | | M/s Flowmore ,Delhi |
| Quantity | | 2 Nos. |
| Type | | Horizontal End Suction Pump,Single Stage |
| Model No. | | M5553 - 65 x 40 |
| Capacity | | 21 m ³ /hr |
| Head | | 40 Mtrs. |
| Design & testing standard | | HIS |
| Total Head at rated capacity | | 40 mLC |
| Pump Input | | 4.86 kW |
| Efficiency | | 0.47 |
| Pump rated Speed | | 1440 RPM |
| MOC | | Impeller - SS - CF 8M (ASTM A 743) Pump Shaft - SS 316 |
| Reference drawing | | GA drg no. - GA/762 02 012K5(A),R2 Drg no. - CSD/762 02 012K5(A),R2 |
| Motor Rating | | Make : ABB Rating : 7.5 kW Frame Size : HX 132 SMC 4 Type :Horizontal Solid Shaft motor,3 phase |
| HRSF FILL PUMP | | |
| Supplier | | M/s Flowmore ,Delhi |
| Quantity | | 1 No. |
| Type | | Horizontal End Suction Pump,Single Stage |
| Model No. | | M5524 - 100 x 80 |
| Capacity | | 95 m ³ /hr |
| Head | | 40 Mtrs. |
| Design & testing standard | | HIS |
| Total Head at rated capacity | | 40 mLC |
| Pump Input | | 18.47 kW |
| Efficiency | | 0.56 |
| Pump rated Speed | | 1470 RPM |

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| MOC | | Impeller - SS - CF 8M (ASTM A 743) Pump Shaft - SS 316 |
| Reference drawing | | GA drg no. - GA/762 01 012K5(B),R4 Drg no. - CSD/762 01 012K5(B),R2 |
| Motor Rating | | Make : ABB Rating :22 kW Frame Size : HX 180 MIC 4 Type : Horizontal Solid Shaft motor,3 phase |
| BLOWERS | | |
| POTABLE WATER BLOWERS | | |
| Make | : | M/s Everest Blowers, Delhi |
| Model no. | : | M 450 |
| Qty | : | 2 Nos. |
| Type | : | Twin Lobe Blower |
| Capacity | : | 0.55 m3/min |
| Pressure | : | 5000 MMWC |
| Motor | : | Rating : 3.0 HP Speed : 1450 RPM Type : 3 phase,Sq. cage,Foot mounted |
| MOC | : | Casing & Lobe : CI as per IS 210 FG 260 Shaft : EN-18 |
| Reference Document | : | Data Sheet no : GMD-004,R3 |
| BLOWERS - PRESSURE SAND FILTERS | | |
| Make | : | M/s Everest Blowers, Delhi |
| Model no. | : | 53 |
| Qty | : | 2 Nos. |
| Type | : | Twin Lobe Blower |
| Capacity | : | 3.46 m3/min |
| Pressure | : | 5000 MMWC |
| Motor | : | Make : Kirloskar Rating : 5.5 kW, 4 pole Qty : 2 Nos. Frame Size : PM 132 S Speed : 1440 rpm Data Sheet no : GMD-003M |
| MOC | : | Casing & Lobe : CI as per IS 210 FG 260 Shaft : EN-18 |
| Reference Document | : | Data Sheet no : GMD-003,R3 |
| DEGASSER AIR BLOWERS | | |
| Make | : | M/s C Doctor,Ahmedabad |
| Model no. | : | CD-RD-BC-481-SWSI |
| Qty | : | 2 Nos. |
| Type | : | Centrifugal |

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| Capacity | : | 45 m ³ /min |
| Pressure | : | 55 MMWC |
| Motor | : | Make : Kirloskar Rating : 1.5 kW,4 pole Frame Size : PM 90L Speed : 1400 RPM Data Sheet no : GMD-006 |
| MOC | : | Casing & Impeller : MS as per IS 1079 |
| Reference Document | : | Data Sheet no : GMD-006,R1 |
| BLOWERS - MIXED BED EXCHANGERS | | |
| Make | : | M/s Everest Blowers , Delhi |
| Model no. | : | 44 |
| Qty | : | 2 Nos. |
| Type | : | Twin Lobe Blower |
| Capacity | : | 1.90 m ³ /min |
| Pressure | : | 5000 MMWC |
| Motor | : | Qty : 2 Nos. Frame Size : PM 132 S Rating : 7.5 HP Speed : 1450 RPM Data Sheet no : GMD-005M |
| MOC | : | Casing & Lobe : CI as per IS 210 FG 260 |
| Reference Document | : | Data Sheet no : GMD-005,R3 |
| AGITATORS | | |
| MORPHOLINE DOSING SYSTEM - AGITATOR | | |
| Make | : | Vallabh Das & Sons |
| Qty | : | 1 No. |
| Type | : | Impeller Type |
| Shaft Length | : | 900 mm |
| MOC | : | Blade , Shaft , Muff Coupling - SS 316 |
| Motor | : | Rating : 0.25 HP Speed : 950 rpm |
| Reference Document | : | Data Sheet no : GMD-009,R2 |
| MB CAUSTIC DILUTION TANK - AGITATOR | | |
| Make | : | Vallabh Das & Sons |
| Qty | : | 1 No. |
| Type | : | Impeller Type |
| Shaft Length | : | 1450 mm |
| MOC | : | Blade , Shaft , Muff Coupling - SS 316 |
| Motor | : | Rating : 0.5 HP Speed : 950 rpm |
| Reference Documents | : | Data Sheet no : GMD-011,R2 |

| SBA CAUSTIC DILUTION TANK - AGITATOR | | |
|---|---|--|
| Make | : | Vallabh Das & Sons |
| Qty | : | 1 No. |
| Type | : | Impeller Type |
| Shaft Length | : | 1400 mm |
| MOC | : | Blade , Shaft , Muff Coupling - SS 316 |
| Motor | : | Rating : 0.5 HP Speed : 950 rpm |
| Reference Document | : | Data Sheet no : GMD-012,R2 |
| N-PIT CAUSTIC DILUTION TANK - AGITATOR | | |
| Make | : | Vallabh Das & Sons |
| Qty | : | 1 No. |
| Type | : | Impeller Type |
| Shaft Length | : | 1450 mm |
| MOC | : | Blade , Shaft , Muff Coupling - SS 316 |
| Motor | : | Rating : 0.5 HP Speed : 950 rpm |
| Reference Document | : | Data Sheet no : GMD-013,R2 |
| SIDE STREAM FILTRATION | | |
| VALVELESS AUTOWASH GRAVITY FILTER | | |
| Manufacturer | : | M/s Otoklin , Mumbai |
| Quantity | : | 4 Nos. |
| Design Pressure | : | Atmospheric |
| Design temperature | : | 50 deg C |
| Model No. | : | VAG 39 |
| Fluid Handled | : | Water |
| Back wash water Qty | : | 26m ³ /3-5 min (approx.) |
| Net flow rate | : | 124 m ³ /hr per filter |
| Filter Media | : | Water Borne Quartz Sand |
| Bed Depth | : | 600 mm |
| Partical Size | : | 0.7 to 1.2 mm |
| Inlet Header | : | 300 NB ASA 150# |
| Outlet Header | : | 400 NB BW end |
| Material | : | IS 2062 Gr. B |
| Reference Documents | : | L&T/GA/VAG/9869,R7,Sheet 1 of 1 |
| Accessories | : | Rotameter , Valves , Sight Glass etc. |

PHOTOGRAPHS:













Gas Turbine GT# 1B



Inlet Filter House of GT # 1A and 1B



Exhaust Duct



Gas Conditioning Skid



Gas Turbine Generator & Auxiliaries



Steam Turbine & Generator



Steam Turbine Auxiliaries

BALANCE OF PLANT



HRSG



Corrosion on structures of HRSG # 1A and 1B



Condition of HP Boiler Feed Pumps



Condition of IP Boiler Feed Pumps

**BFW Pumps
Cooling Tower**

Cooling tower is of concrete structure



Cooling Tower



Cooling Water Pumps

DM Plant & Dozing System



DM Water Plant



Tanks for DM plant



Dozing Skids



Transformer



HT Switchgear



Switch yard Control



Battery Bank for GTG



Battery

CONTROL SYSTEM & DCS PANELS

Control Room































